كلية الطب البيطري

أولاً: الماجستير

قسم الأمراض المشتركة

الأهمية الصحية العامة لوبائية الحمى القلاعية
PUBLIC HEALTH IMPORTANCE OF FMD EPIDEMIOLOGY

ياسر محمد جادو بسيونى

SUMMARY

This study was done on ٢٨ field samples (tongue epithelial and foot lesion) are collected from ٥ Governorates (Kafr-Elsheikh El-Sharkya EL-Monofya El-Behera Alexandria Governorates) after notification about cases of FMD outbreak.

These samples were grind in sterile sand in mortar and ٢ml of PBS (phosphate buffer solution) and centrifuged at ٤٠٠٠ RPM for ٣٠ minutes, after that the supernatant has been taken for testing.

In order to explore the role of environment in epidemiology of FMD we try to detect FMD virus in the surroundings of animals, in this test we took ٥ samples of manure and ٥ samples of soil from infected farms from each Governorate

About ٥ gm of soil or feces were mixed in (PBS) ٢٥٪ w/v (in ٢٠ml PBS) and centrifuged at ٣٠٠٠ RPM for ١٢ minutes then the supernatant and mixed with antibiotic and antifungal in concentration of ١٠٠ unit/ml neomycin , ١٥٠ unit/ml mycostatin and stored at -٧٠^{o}C, then inoculated in Tissue culture and confirmed by ELISA.

قسم الباثولوجي

دراسة باثولوجية على بعض المبيدات في الجرذان البيضاء
PATHOLOGICAL STUDY OF SOME PESTICIDES IN ALBINO RATS

أيمن على احمد عطيه

SUMMARY

A total number of ١٢٨ male rats were used to study the toxic injury of organophosphorous compounds and studying the tissue reaction to malathion, pirimiphos-methyl and combination of both of them for one month. The rats divided into ٤ groups, control, malathion, pirimiphos-methyl and combination group.

Rats were sacrificed and tissue specimens were taken from the liver, kidneys, brain, testis and other organs. Dissection did not show any obvious macroscopic lesions except hyperemia and heamorrhages of the internal organs.

Microscopic examination:

Liver was the most affected organs in the three groups subjected to toxins or their combination. This indicate that the liver is the main organ of biotransformation and also the kidneys where it'is the main organ for excretion of these substances. Examination of the liver revealed toxic injury of the liver exhibited in the form of sinusoidal cells activation, vacuolar degeneration and focal areas of parechymatous degeneration. The lesions were fulminating in the ١st and ٢nd week after exposure to malathion or to pirimiphos-methyl. in combination group the lesions were more prominent .

Examination of the kidneys revealed congestion of the glomerular tuft and interstitial blood vessels and vacuolation of the renal tubular epithelium. Glomeruli showed slight hyper cellularity in acute stage while

glomerular atrophy in the later weeks after treatment with malathion or pirimiphos-methyl. perivacular infiltration of esinophiles were characteristic to malathion exposure.

Combination group showed minarked increase in the action of toxin where this groups showed feature of interstitial nephritis.group ٣olso see page ٦٦ .

Brain

Brain lesion in all groups subjected to organophosphorous showed oedema , ischemic neuronal injury, and gliosis. In combination group, the brain showed perivascular cuff's.

Heart

Heart showed focal myocardiosis where it increased in combination group to form myocarditis found other groups see results .

Testis

Sertoli cell vaculation and tubular atrophy with degeneration of spermatogenic cells and interstitial oedema . Pirimiphos-methyl treated group showed similar changes Also severe lesions were noted with combination group.

Spleen

Malathion treated groups revealed lymphoid hyperplasia while Pirimiphos-methyl treated group revealed lymphocytic depletion .

Lungs

Malathion treetment showed marked intraveolar heamorrhages and interstitial pneumonia where the other groups showing similar lesions but less in the reactions .

Malathion has specific criteria where it showed infiltration of esinophiles in all organ indicating occurrence of allergic condition .

قسم الجراحة البيطرية

إحداث العقم في الكلاب باستخدام منظار البطن الجراحي
LAPAROSCOPIC STERILIZATION OF DOGS

محمد وفقى توفيق عيد

SUMMARY

The present study was carried out on ٢٤ apparently healthy street dogs of different sexes (١٢ males and ١٢ females), ages and weighting from ٨-٢٠ kg; at Surgery Department, Faculty of Veterinary Medicine, Kafrelsheikh University. The experimental dogs were divided into eight groups; each group included three dogs for each procedure.

Dogs were fasted for ١٢-٢٤ hours and surgically prepared for aseptic abdominal procedure. The dogs received xylazine hydrochloride in a dose of ٢-٣mg/kg of body weight. Local infiltration of lidocaine ٢٪ was used at the sites of port placement. After preparation, the dogs laid on dorsal recumbency and positioned in Trendelenburg position.

Following the routine surgical preparation and draping, Veress insufflation needle was placed at the umbilicus and the abdominal cavity was insufflated by Co_2 gas to ١٢-١٤ mm/Hg.

After insufflation of the abdomen, the Veress needle was removed and the main port cannula was introduced intra-abdominal via a supra umbilical ١٠ mm skin incision. A ٥ mm or ١٠ mm laparoscope was introduced into the abdominal cavity via the main cannula. The laparoscope was used to view the scene of the intra-abdominal content on a high resolution TV monitor. Two or three accessory ports were placed lateral to the main one. These ports were used to introduce the sophisticated ٥ mm or ١٠ mm endoscopic instruments into the abdominal

cavity. The instruments facilitated manipulation of the internal organs and made the surgical interference available.

Two main procedures were used to sterilize male and female dogs which are; the destructive method based on severing the vas deference in male dogs and the uterine horns in the females in order to prevent transportation of gametes into the genital tract of each. The other method was the occlusive method which based on occluding the lumens of the vas deference or the uterine horns to prevent the gametes from getting exposed.

The study revealed that laparoscopic sterilization was a feasible, minimal invasive, less time and money consuming, highly efficient technique and animals could be left at the day of the procedure.

Dogs showed minimal pain after the procedures, less scar formation. The small skin incisions and aseptic preparations used in the procedures made the incidence of infection very low.

الرقابة الصحية على اللحوم ومنتجاتها قسم

الإصابة بطفيليات العضلات في الحيوانات المذبوحة
MUSCULAR PARASITIC AFFECTIONS IN SLAUGHTERED ANIMALS

شيرين عبد الفتاح يس زرد

SUMMARY

A total one hundred of freshly slaughtered meat samples [٤٠ samples infected with sarcocysts , ٣٠ samples infected with cysticercous bovis and ٣٠ non infected samples] were collected from Mahalla , Kotour and Kafr El-Sheikh abattoirs and subjected to microbiological , chemical (determination of pH values and chemical analysis of meat) parasitological , and Histopathological examinations .

Microbiological examination of meat samples:

The aerobic bacterial count ranged from ٣.١ x ١٠^٤ to ٩.٤٥ x ١٠^٦ cfu/g with a mean value ١.٤١٤ x ١٠^٦ ± ٢.٤٩ x ١٠^٥ for samples infested with sarcocysts; ١.٠١ x ١٠^٥ to ١.٦٤ x ١٠^٧ cfu/g, with a mean value ٢.٢١٥ x ١٠^٦ ± ٦.٣٠ x ١٠^٥ cfu/g for samples infected with cysticercous bovis while non infected samples ranged from ١.٨ x ١٠^٤ to ٢.٠٣ x ١٠^٦ cfu/g, with a mean value ٧.٤١ x ١٠^٥ ± ١.٣٦ x ١٠^٥ cfu/g.

While the *Enterobacteriaceae count* ranged from ١.٢ x ١٠^٤ to ٩.٧ x ١٠^٥ cfu/g with a mean value of ٢.٥٠ x ١٠^٥ ± ٤.٣ x ١٠^٤ cfu/g, for samples infected with sarcocysts; ١ x ١٠^٤ to ٩.٦٥ x ١٠^٥ cfu/g with a mean value ٣.٠٥ x ١٠^٥ ± ٥.٥٧ x ١٠^٤ cfu/g for samples infected with cysticercous bovis ,while non infected samples ranged from ١ x ١٠^٤ to ٩.٤ x ١٠^٥ cfu/g ,with a mean value ١.١٥ x ١٠^٥ ± ١.٦٢ x ١٠^٤ cfu/g.

Results also revealed that *Staphylococcus aureus* count ranged from ١ x ١٠^٤ to ٩.٦٥ x ١٠^٥ with a mean value ٩.٨٢ x ١٠^٤ ± ٣.١ x ١٠^٤ cfu/g. for samples infected with sarcocysts; ٢ x ١٠^٤ to ٨.١ x ١٠^٥ with a mean value of ١.٢١ x ١٠^٥± ٣.١٥ x ١٠^٤ cfu/g. for those infected with cysticercous bovis while non infected samples ranged from ١ x ١٠^٤ to ٧.١ x ١٠^٥ with a mean value of ٥.٩٦ x ١٠^٤ ± ٢.٥٦ x ١٠^٤ cfu/g.

The total yeast and mould count ranged from ١.١١ x ١٠^٤ to ١.٥٢ x ١٠^٦ with a mean value ٣.١٢ x ١٠^٥ ± ٥.٧٥ x ١٠^٤ cfu/g for samples infected with sarcocysts; ٤ x ١٠^٤ to ٨.١ x ١٠^٥ with a mean value ٣.٢٥ x ١٠^٥ ± ٤.٩٦ x ١٠^٤ cfu/g.for samples infected with cysticercous bovis while non

infected ones ranged from ٣ x ١٠^{٣} to ٩.٢ x ١٠^{٥} with a mean value of ٢.٠٩ x ١٠^{٥} ± ٤.٩٧ x ١٠^{٤} cfu/g..

Chemical examination of meat samples :

Chemical examination was done to determine the effect of these parasites on meat quality.

The chemical analysis of meat determination of protein percent in samples infested with sarcocysts was ranged from ١٣.٢١٪ to ١٧.٨٤٪ with mean value of ١٦.٢٢ % ± ٠.١٣٢ and in samples infested with cysticercous bovis the protein % was ranged from ١٥.٧٣٪ to ١٧.٩٢٪ with mean value of ١٧.٤٢ ± ٠.٠٩٠١ while in non infested samples protein percent was ranged from ١٦.٩٩٪ to ١٨.٠٢٪ with mean value of ١٧.٩٧٪ ± ٠.٠٣٣٩.

The fat percent for meat samples infested with sarcocysts was ranged from ٠.٣١ to ٣.٢٢ with mean value of ١.٥٠ % ± ٠.١٣٤, and the fat percent for meat samples infected with cysticercous bovis was ranged from ٠.٣٢ to ٣.٦٤ with mean value ١.٧٩ % ± ٠.١٥٩ while in non infected ones the fat percent was ranged from ٠.٩٣ to ٤.٣٩٪ with mean v The ash percent in samples infected with sarcocysts was ranged from ١.١٥ to ١.٧٢ with mean value of ١.٥٣٪ ± ٠.٠١٧١ and the ash percent for meat samples infected with cysticercous bovis was ranged from ١.٠١ to ١.٤٥٪ with mean value ١.٢٣٪ ± ٠.٠٢١ while in non infected sample the ash percent was ranged from ٠.٩٩ to ١.٢٣ with mean value ١.١٧٪ ± ٠.٠١٠٦.

The moisture percent in infected meat samples with sarcocysts ranged from ٧٧.١٣ to ٨٢.٣٩ with mean value ٧٩.٦٢ % ± ٠.٢٣ and the moisture percent in infected meat samples with cysticercous bovis ranged from ٧٦.٠١ to ٨١.٧٤ with mean value ٧٨.٣٣ % ± ٠.٣٠١ while the moisture percent in non infected ones ranged from ٧٥.٩٩ to ٨١.٥٩٪ with mean value ٧٧.٩١ % ± ٠.٢٩٧.

The results of pH value ranged from ٥.٦٩ to ٦.٠٩ with a mean value ٥.٩٣ ± ٠.٠٢١ for samples infested with sarcocysts; ٥.٥٧ to ٦.٠٢ with a mean value ٥.٨١ ± ٠.٠٢٣١ for samples infested with cysticercous bovis while non infested samples ranged from ٥.٠١ to ٥.٥٦ with a mean value ٥.٣١ ± ٠.٠١٩١.

Parasitological examination revealed presence of macroscopic sarcocyst in the esophagus and tongue of ٤٠ buffaloes . And cysticercus bovis present in heart of ٣٠carcasses.

On the other hand, the histopathological examination of infected meat samples with sarcocyst revealed slight esinophilic miositis and slight infiltration of eosinophils.

The histopathological examination of infected meat samples with Cysticercous bovis showing suppurative nodule and completely necrosed cardiac muscle except small parts have a core of inespissated and scattered neutrophilic masses .

الحالة الميكروبية الاطعمة ذات الاصل الحيوانى المتداولة فى الشوارع
MICROBIOLOGICAL QUALITY OF STREET VENDED FOODS OF ANIMAL ORIGIN

هشام ابو الفتوح احمد آدم

SUMMARY

This study was carried out to investigate the safety and quality of traditional ready-to-eat street-vended foods of animal origin collected from several street vendors surrounding a major point of road transit in Gharbia governorate. One hundred samples of cooked liver and kofta (٥٠ of each) were collected randomly from vendors for determination of total aerobic counts, Staphylococcus counts, and coliforms count as well as detection of *Staphylococcus aureus, Ssalmonella* and other members of coliform.

The current results indicated that the mean values of total aerobic count, staphylococcus count, and coliforms count for street vended cooked liver samples were ١.٣X١٠^٥ ±١.٦٩٣X١٠^٤, ٨.٧X١٠^٤+١.١٨X١٠^٣ and ٢.٦X١٠^٣ +١.٠١X١٠^٣ CFU/g, respectively. Meanwhile, the mean values of total aerobic count, staphylococcus count, and coliforms count for street vended cooked kofta samples were ١.٣٧X١٠^٥±١.٧X١٠^٤, ١.٢٤ X ١٠^٥ ± ١.٥ X ١٠^٤ and٩.٣x١٠^٣ ± ٣.٥x١٠^٣ CFU/g, respectively.

On the other hand, *Staphylococcus aureus* were only isolated from ١٠٪ of the examined cooked liver and kofta samples with a mean value of ٨.٧X١٠^٤ ±١.١٨X١٠^٣ and ٦.١٤ X ١٠^٣ ± ٤.٧ X ١٠^٣ CFU/g, respectively. Regarding to the bacterial population of total aerobic, staphylococcus and coliform counts in the cooked liver, the results indicated that ٠٪, ٠٪, ٨٠٪ of the samples were contaminated with ١٠^٢≤١٠^٣ CFU/g; and ٦٪, ٢٪, ١٢٪ of the samples were contaminated with١٠^٣≤١٠^٤ CFU/g; meanwhile ٥٠٪, ٦٠٪, ٨٪ of the samples showed bacterial population of ١٠^٤≤١٠^٥ CFU/g; and ٤٤٪, ٣٨٪, ٠٪ of the same samples revealed high bacterial count of ١٠^٥<١٠^٦ CFU/g, respectively. Moreover, the frequency distribution of total aerobic, staphylococcus and coliform counts in the cooked kofta, our results revealed that ٧٠٪, ٠٪, ٠٪, of the samples were contaminated with ١٠^٢≤١٠^٣ CFU/g; and ٤٪, ٠٪, ١٨٪ of the samples showed bacterial population of ١٠^٣≤١٠^٤ CFU/g respectively. Meanwhile, ٥٢%, ٥٠%, ١٢% of the examined samples showed ١٠^٤≤١٠^٥ CFU/g; and ٤٤٪, ٥٠٪, ٠٪ of

the same samples revealed high bacterial count of $10^{5}<10^{6}$ CFU/g for total aerobic, staphylococcus and coliform counts, respectively.

The statistical analysis indicated that significant differences ($P<0.001$) were observed between the ٣ total bacterial (aerobic, staphylococcus and coliform) counts concerning the examined samples of cooked liver and kofta.

Furthermore, strains of members of coliform recovered from the examined liver and kofta samples were, Acentobacter baumanni, Acentobacter lowoffii, Citrobacter brarki, Citrobater diversus, Citrobacter farmeri Citrobacter freundii, Citrobacter youngae, Enterbacter agglomerans, Enterobacter cloacae, Enterobacter gergoviae, Enterobacter aerogenes, Escherichia coli, Klebsiella ozaenae, Klebsiella pneumoniae, Klebsiella oxytoca, Klebsiella terrigena, Klebsiella ascorbata.

Although *Salmonella spp*. was not detected in any of the examined liver samples, *Salmonella typhimurium* was isolated from only one kofta sample.

The study concluded that the quality and safety of street foods samples from vendors in Gharbia province was unacceptable. Consequently, this study highlighted that the production of relatively safe street-vended foods with low bacterial counts may be possible provided attention is paid to improve the environmental conditions, personal hygiene and sanitary facilities.

قسم الطيور والأرانب

دراسات عن عدوى الأورنيثوباكتيريم رينوتراكيال في الأرانب

STUDIES ON ORNITHOBACTERIUM RHINOTRACHEALE (ORT) INFECTION IN RABBITS

سهير احمد عطية

ABSTRACT

Ornithobacterium rhinotracheale (ORT) is a recently described species of bacterium associated with respiratory disease, growth retardation, decreased fertility in rabbits. Sinusitis, tracheitis, pneumonia, pleuritis, and hydrothorax characterize the infection. ORT has been isolated in many locations in Kafrelsheikh. The aim of this study was to isolate and identify the bacteria in rabbits. The isolates were cultured on sheep blood agar with gentamycin and showed morphological, biochemical and serological characters. The results were confirmed the presence of ORD in rabbits in Egypt.

قسم بكتريا وفطريات ومناعة

دراسات بكتريولوجية عن اريموناس هيدروفيلا فى الاسماك فى محافظة كفر الشيخ

BACTERIOLOGICAL STUDIES ON AEROMONAS HYDROPHILA IN FISH IN KAKR EL SKEIKH GOVERNORATE

تريزا موريس عازر أسعد

ABSTRACT

Aeromonas hydrophila is considered as an important fish pathogen affecting several species of fish.During this study , (٢٧٠) samples of two types of fish (*Oreochromis niloticus* and *Clarias garibensis)* were collected from different sources in Kafr El-Sheikh Governorate,and were bacteriologicaly examined for isolation and identification of this bacterium. A total of (٣٩) isolates were isolated on Rimler-Shotts medium.All these strains were subjected to morphological and biochemical identification, and (١٨)(٤٦.١٥٪) of them were identified as A.hydrophila,(١٥)(٣٨.٤٦٪) as *A.sobria* and (٦) (١٥.٣٨٪)were untyped. Aeromonas species were isolated and identified from diseased and apparently healthy fish These bacteria are G-ve, short rods, non-sporulated, non-capsulated ,motile, oxidase and catalase positive.Using PCR, they produced a DNA band at ٤٧٦ bp. Most of these (١٨) strains were sensitive to Streptomycin, oxytetracycline, nalidixicacid, nitrofurantoin, chloramphenicol, gentamycin, kanamycin, trimethoprim-sulfamethoxazole and erythromycin at different percentages,while,ampicillin,penicillin and amoxycillin, were completely resistant.

قسم تشريح وأجنة

بعض الدراسات التشريحية على التجويف الأنفى فى الجمل وحيد السنام
SOME ANATOMICAL STUDIES ON THE NASAL CAVITY IN THE ONE HUMPED CAMEL
(CAMELUS DROMEDARIUS)

محمود سعد محمود جويلى

SUMMARY

This study was carried out on the nasal cavity of seventeenth healthy adult camels. The specimens were collected from El Kalioubia and Kafrelsheikh governorates slaughter houses. The freshly collected samples were fixed, dissected and photographed. Sagittal as well as transverse sections of the heads were made to study the arrangement of different structures found into the nasal cavity and their topographical relations. The specimens for microscopic studies were fixed in different fixatives and prepared to be examined by light and electron microscopes.

The gross morphological examination of the camel nasal cavity revealed that:

١-It is differentiated into three regions; a) rostral region (the nasal vestibule) covered with skin in its initial region then changed into a smooth mucosa in the reminder, b) middle (respiratory) region had a dorsal, middle and ventral conchae, and c) caudal (olfactory) region contained the ethmoidal conchae.

٢- The dorsal concha is represented by basal lamella rostrally, but caudally it forms a dorsal conchal sinus. The ventral concha has two spiral lamellae, arranged as dorsal and ventral one rostrally but caudally they arranged them selves as medial and lateral respectively. The middle concha encloses a large middle conchal sinus.

٣- Presence of the rostral opening of the nasolacrimal duct in the medial surface of the lateral wall of the nasal vestibule at the rostral end of the basal fold.

٤- The incisive duct end blindly under the mucosa of the hard palate and connected with neither the oral cavity nor the vomeronasal organ.

Histologically, the septal and lateral walls of the nasal vestibule were lined by stratified squamous epithelium while the remaining non olfactory mucosa showed the form of respiratory epithelium with its cilia and goblet cells; on the other hand, a small caudal portion of the ethmoidal conchae was covered by an olfactory epithelium.

SEM (Scanning Electron Microscope) study revealed presence of polyangular microvillar cells in the surface epithelium of the nasal vestibule, dominance of ciliated cells with goblet cells in the respiratory region, while in the olfactory region, there were olfactory vesicles with short hair-like projections. TEM (Transmission Electron Microscope) study showed the ultra structures of different cell types in the main three regions of the nasal cavity.

In conclusion, the nasal cavity of the camel has number of peculiar features, as it was narrow rostrally and markedly wide caudally. The nostrils were slit like narrow openings. The nasal vestibule has collection of long hair in its cutaneous lining and scanty cartilaginous lateral support. The middle meatus was divided caudally into dorsal and ventral channel by the middle nasal concha. The incisive duct was blind end tube. Presence of numerous goblet cells and mucous secreting glands in the surface epithelium of the nasal conchae. The olfactory mucosa was a narrow area in the nasal fundus.

All previous macro and microscopic structures reflect the adaptation of dromedary camel with the around environmental conditions.

قسم تغذية الحيوان والدواجن وأمراض سوء التغذية

تأثير إضافة الأحماض العضوية للعلائق على كفاءة بداري التسمين
INFLUENCE OF DIETARY ORGANIC ACIDS SUPPLEMENTATION ON BROILER PERFORMANCE

الدسوقي السعيد محمد ناصف

SUMMARY

Alternatives to antibiotic growth promotants in commercial chickens have become important, among the candidate replacements for antibiotics are organic acids both individual acids and blends of several acids.

The current experiment was carried out to investigate the effects of dietary organic acids on growth performance, immune status and carcass quality of the broiler chickens. One hundred, one week broiler chicks were allocated at random into four groups. The four groups were fed with the basal diet (control) or diets supplemented with organic acids at the level of ٠.٠٥٪, ٠.١٪and ٠.٢٪.

The basal diet, in ٢ phases program (starter and grower) was formulated of yellow corn, soybean meal, herring fish meal, corn oils, sodium chloride, dicalcium phosphate, limestone and methionine to cover the requirements of the broilers according to Hubbard broiler chicks requirements.

The birds were reared on open floor system, the area of the floor was nearly ٤$m^{٢}$/group, and the floor was bedded with chopped wheat straw. The temperature was maintained at ٣٣C^{o} for first ٤ days of age then decreased ٣c/per week until maintained at ٢٤-٢٧C^{o} till the end of the experiment. The birds had free access feed and water for ٢٤hr. The light was continuously maintained during day and night for the whole experimental period.

Every week, the birds were weighed, their feed intake was measured and the FCR was calculated to measure the growth performance and feed utilization of the experimental chickens. All the chicks were vaccinated against Newcastle and Infectious bursal diseases, Blood samples were collected at (٢٥^{th} and ٤٩^{th} days) in order to measure the humoral immune response and cell mediated immune response.

On ٣٥^{th} day, five birds from each group were randomly selected to be orally infected by pathogenic E-coli (serotype O٧٨) with a dose approximately $١٠^{٩}$ CFU/bird. Mortalities among infected birds in various groups were registered to determine relative level of protection. The cecal contents from both infected and non infected groups were aseptically collected and used to quantify E-coli count.

Five birds from each non infected birds were randomly selected, weighed before slaughtering, slaughtered, defeathered, processed and eviscerated. Determination of carcass weight before and after nearly ٥ months freezing was performed in order to measure the drip loss.

The results showed that there is no significant effect of the dietary organic acids either on growth performance or the humoral immune response or the dripping percentage but they have a significant effect on E-coli count, mortality rate and H/L ratio.

قسم الأمراض المعدية

دراسات على السل الكاذب في الأغنام والماعز

STUDIES ON CASEOUS LYMPHADENITIES IN SHEEP AND GOATS

عاطف فتحي حامد عريبى

SUMMARY

This study was carried out on ١٤٦٦ alive animals (٩٧٧ sheep and ٤٨٩ goats) and ٩٦٢ slaughtered animals (٦٩٢ sheep and ٢٧٠ goats) during the period from January ٢٠٠٨ to December ٢٠٠٨ to determine some epidemiological, clinical, histopathological and preventive measures associated with CLA.

The prevalence of caseous lymphadenitis (CLA) in alive animals was ١٩.٢٣٪ on the basis of clinical exam whereas it was ١٧.٣٢٪ on the basis of bacteriological examination.

The prevalence was ٢٣.٣٣٪ in alive sheep and ١١.٠٤٪ in alive goats on the basis of clinical examination whereas it was ٢٢.١٠٪ in sheep and ٧٧.٧٪ in goats on the basis of bacteriological examination.

The prevalence of CLA among slaughtered animals was ٢٦.٩٢٪ on the basis of gross examination whereas it was ٢٥.٠٥٪ on the basis of bacteriological examination, the prevalence was ٣٣.٢٣٪ among slaughtered sheep and ١٠.٧٤٪ among slaughtered goats on the basis of gross examination whereas it was ٣٢.٦٥٪ in sheep and ٥.٥٥٪ in goats on the basis of bacteriological examination.

The disease prevalence was significantly higher in alive (١٩.٦٧٪) and slaughtered (٦٣.٨١٪) females than in alive (١٢.٤٢٪) and slaughtered males (٧. ١٤٪).

In alive animals, the disease was significantly differed among different age groups where higher prevalence was recorded in animals of the age

group from ١-٢ yeas (٤٧.٣٦٪) followed by animals of the age group over ٢ years (١٨.٦٩٪) and lastly of the age group under ١ year (٣.٠٧٪).

In slaughtered animals, the prevalence was statistically differed between different age groups where highest prevalence was recorded in animals of the age group over ٢ years (٥١.٣٥٪) followed by animals of the age group from ١-٢ years (٨.٨٤ %) and lastly animals under ١ year (٧.٥ %).

The disease was significantly higher in private flocks (٤٥.٥٢٪) than in governmental flocks (١.٥٩٪).

The clinical picture associated with CLA was categorized in two forms, superficial and visceral. The first one was manifested by superficial enlargement of the superficial lymph nodes whereas the second form was difficult to be diagnosed clinically.

Superficial form was more common in sheep than goats whereas visceral form was not recorded in goats.

Parotid lymph nodes were the most commonly affected nodes in sheep whereas, prescapular lymph nodes were the most commonly affected nodes in goats.

The superficial lymph nodes of the anterior body half showed the highest infection rate in both alive and slaughtered animals.

Cross section of affected lymph nodes revealed thick caseated greenish pus surrounded by thick fibrous tissue.

Histopathology of the affected lymph nodes revealed pyogranulomas with lymphocytes and neutrophiles.

Histopathology of the affected lung revealed pulmonary congestion with features of interstitial pneumonia with mononuclear cell infiltration.

Corynebacterium pseudotuberculosis was detected in ٩١.٤٩٪ of the clinically infected cases.

The experimental injection of guinea pigs by the pyogenic materials that obtained from CLA infected animals resulted in death of the guinea pigs within ٧-٩ days and C. pseudotuberculosis was isolated from them. Grossly dead guinea pigs showed congestion and maceration at the site of injection and in the visceral organs in addition to enlargement and obscessiation of the testicles.

Histopathology of dead guinea pigs revealed degeneration of the spermatogenic cells with areas of granulation tissue formation in the epididymis. Moreover the infected kidney showed focal interstitial nephritis.

Control measures using penicillin at day zero of shearing in addition to disinfection of shearing instruments and wounds reduced greatly the disease occurrence. Also before shearing infected or suspected animals should be sheared lastly.

دراسات على الإصابة بديدان البارامفيستومم فى المجترات

STUDIES ON PARAMPHISTOMIASIS IN RUMINANTS

اميرة جعفر محمود الطنوبى

SUMMARY

This study was carried out through January ٢٠٠٨ to December ٢٠٠٨ at Kafr El-Sheikh Governorate to determine some epidemiological and clinical features concerning paramphistomiasis in ruminants. Moreover, different treatment trails were conducted to evaluate their efficacy.

Out of ٩٤٤ examined animals (٣١٦ cattle ٢١٨ buffalos and ٤١٠ sheep), paramphistomiasis was confirmed in ٢٦٠ of them representing morbidity rate of ٢٧.٥٤. The prevalence rate was ٣٨.٩٢٪, ٤٢.٢٠٪ and ١٠.٩٨٪ among examined cattle, buffaloes and sheep respectively.

At Kafr El-Sheikh abattoir, out of ٢٢٠ slaughtered animals (٤٣ cattle, ١٧٢ buffaloes, and ٥ sheep) paramphistomum species were detected in ٥٠ of them representing an infection rate of ٢٢.٧٪. The prevalence rates were ٣٩.٥, ١٨.٦ and ٢٠٪ among slaughtered cattle, buffaloes and sheep respectively.

Geographically, the disease distribution varied in different areas of Kafr El-Sheikh, being highest at El-Riad (٦١.٧٦٪) and lowest at Balteem (٠٪).

Concerning the sex predisposition, the prevalence of the disease was significantly higher in females (٤١.٦١٪) than males (٢٧.٤٥٪) in livestock whereas, insignificant increase was recorded in females (٣٠.٧٧٪) than that in males (٢٠.٩٩٪) of the slaughtered animals.

Concerning age susceptibility, the prevalence of paramphistomiasis differed significantly among different age groups. The prevalence was ٢.٦٪ in animals of the age group under one year, ٤٩.٤٨٪ in animals of the

age groups from one to two years old, ٤٨.٢٩٪ in animals of the age group from two to four years and ٥٤.١٪ in animals of the age group more than ٤ years.

Concerning the seasonal distribution, the disease was higher in spring (٥٠.٨١٪) followed by autumn (٣٦.٠٣٪) then winter (٣٤.٥٪) and lastly summer (٣٤.١٢٪).

Concerning the clinical signs which were recorded in this study, ١٩٠ infected animals out of ٢٦٠ parasitologically positive animals showed no clinical reaction, the remaining infected animals showed diarrhoea, emaciation, submandibular oedema, rough coat and decreased milk yield in variable severity correlated to the faecal egg counts.

The detected Paramphistomum species were *Paramphistomum cervi*, *Carmyerius gregarious*, and *Cotylophoron cotylophorum*.

Gross pathological changes in paramphistomum infected animals revealed atrophy of the ruminal papillae in addition to necrosis and erosion of ruminal mucous membrane.

The histopathological changes were in the form of mononuclear cell infiltration in the submucosa of the ruminal papillae, necrosis and degeneration in the gland of the duodenum.

Haematological changes in paramphistomiasis infected animals were in the form of a significant decrease in the levels of RBCs, WBCs and PCV, in addition to a significant increase in eosinophils. Moreover, insignificant alterations in the values of lymphocytes, monocytes and blood platelets were recorded.

It was observed that oxyclozanide was ٩٧.٩٪ effective against mature paramphistomes whereas niclosamide failed to cure completely any of the infected animal.

قسم الباثولوجيا الإكلينكية

دراسات باثولوجية إكلينيكية على تأثير الاصابة بالايمريا ستيديا على اللقاحات المستخدمة فى الارانب

CLINICOPATHOLOGICAL STUDIES ON THE EFFECT OF EIMERIA STIEDAE INFECTION ON VACCINES USED IN RABBITS

سعاد عبد الرحمن المرسى

SUMMARY

Rabbit production in Egypt affected greatly by hepatic coccidiosis, also many vaccines were introduced to overcome the viral and bacterial infection which make great losses in rabbits and affect the liver of the rabbits, the most important diseases are snuffles (pasteurella multocida) and viral heamorrhagic disease.

In this study ٣٠ rabbits devided into ٦ groups; ٥ groups were were used for the experiment and another group left as –ve control, one group as positive control (infected with Eimeria stiedae oocysts) by ١٥٠٠٠ sporulated oocysts, another group infected with Eimeria stiedae oocysts (١٥٠٠٠ sporulated oocysts for each rabbit) and vaccinated with adjuvented inactivated RHDV vaccine ٠.٥ cm s/c in the thigh and oil adjuvented polyvalent pasteurella vaccine ٠.٥ cm s/c in the neck, another group vaccinated with adjuvented inactivated RHDV vaccine ٠.٥ cm s/c in the thigh, other group vaccinated with oil adjuvented polyvalent pasteurella vaccine ٠.٥ cm s/c in the neck. The last group: infected with Eimeria stiedae oocysts and vaccinated with oil adjuvented polyvalent pasteurella vaccine after ٣٠ days of infection.

Samples were taken from each group for heamatological examination, clinicopathological, histopathological and parasitological examination.

The results revealed that:

- RBCs: showed its highest level in ٣rd week in group (٥) and lowest level in ٢nd week in group (٦).
- Hb: showed its highest level in ٤th week in group (٤) and lowest level in ١st week in group (٢).
- PCV: showed its highest level in ٤th week in group (٥) and lowest level in ٤th week in group (٦).
- MCV: showed its highest level in ١st week in group (٥) and lowest level in ٤th week in group (٦).
- MCH: showed its highest level in ٢nd week in group (٤) and lowest level in ٥th week in group (٦).
- MCHC: showed its highest level in ٢nd week in group (٥) and lowest level in ١st week in group (٢).
- WBCs: showed its highest level in ٥th week in group (٥) and lowest level in ٣rd week in group (٤).
- ALT: showed its highest level in ٤th week in group (٢) and lowest level in ٣rd week in group (٤).
- AST: showed its highest level in ٤th week in group (٢) and lowest level in ٤th week in group (٤).
- Cholestrol: showed its highest level in ٥th week in group (٢) and lowest level in ٢nd week in group (٥).
- Total lipids: showed its highest level in ٢nd week in group (٣) and lowest level in ١st week in group (٥).
- Bilirubin: showed its highest level in ٤th week in group (٣) and lowest level in ٥th week in group (٤).
- Total protein: showed its highest level in ٤th week in group (٥) and lowest level in ٢nd week in group (٦).
- Albumin: showed its highest level in ١st week in group (٤) and lowest level in ٢nd week in group (٦).

- Globulin: showed its highest level in ٤th week in group (٤) and lowest level in ١st week in group (٢).
- Creatinine: showed its highest level in ٢nd week in group (٣) and lowest level in ١st week in group (٤), ٢nd week in group (٥).
- Oocyst of Eimeria stiedae: showed its highest level in ٢nd week in group (٢) and lowest level in ٢nd week in group (٦).

There was negative effect to the infection with Eimeria stiedae on the body which effect the response to the vaccination, also I observed that the growth rate in rabbits infected with Eimeria stiedae and vaccinated with both of viral and bacterial vaccines appeared depressed in growth.

قسم الفارماكولوجيا

دراسات فارماكوديناميكية على الأبراميسين في حيوانات التجارب
PHARMACODYNAMIC STUDIES ON APRAMYCIN IN EXPERIMENTAL ANIMALS

حازم عمر عبد الجليل خليفة

SUMMARY

The present work was performed to investigate the pharmacodynamic effects of apramycin on some isolated preparations (smooth muscles, cardiac muscles and skeletal muscles).

Studies were also carried on intact animals.

١. Effects on isolated smooth muscles:-

Apramycin in a concentration lower than ٦٠٠ µg/ml bath had no effect on the motility of isolated rabbit's duodenum. Concentrations of ٦٠٠ and ٨٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Concentrations of ١٠٠٠-٣٠٠٠ µg/ml bath caused a marked inhibition in the force of contraction of isolated rabbit's duodenum. Complete relaxation of intestinal motility was achieved by a concentration of ٤٠٠٠ µg/ml bath apramycin.

Apramycin in a concentration lower than ٤٠٠ µg/ml bath had no effect on the motility of guinea pig's ileum; concentrations of ٤٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Stronger concentrations (٦٠٠-١٠٠٠µg/ml bath) caused a marked inhibition in the force and frequency. Complete relaxation was produced by addition of ٢٠٠٠ µg/ml bath apramycin. The site of action of apramycin on the intestinal motility was probably induced by a blockage of the autonomic ganglia. Since small dose of nicotine sulphate failed to produce its stimulant effect in the presence of the drug.

Apramycin in a concentration lower than ٢٠٠ µg/ml bath had no effect rat's fundic strip, concentration of ٢٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Stronger concentrations (٣٠٠-٤٠٠µg/ml bath) caused a marked inhibition in the force and rate. Complete relaxation was produced by addition of ٦٠٠ µg/ml bath apramycin.

Apramycin in a concentration of ١٠٠ µg/ml bath induced a slight inhibition in the force of contraction of rat's uterine muscles in oestrous and late pregnant stages. In anoestrous and early pregnant stage, apramycin had no effect at the same concentrations. Concentration of ٢٠٠ µg/ml bath apramycin induced a slight inhibition in the force of contraction of the myometrium at anoestrous, oestrous and early pregnant stages, but induced a marked inhibition in the force of contraction at late pregnant stage. Concentration of ٣٠٠ µg/ml bath apramycin induced a slight inhibition in the force of contraction of the myometrium at anoestrous while it produced a marked inhibition in the force and frequency of contraction of the myometrium at oestrous, early pregnant and late pregnant stages. Concentration of ٤٠٠ µg/ml bath apramycin induced a marked inhibition in the force and frequency of contraction of the myometrium at all stages of sex cycle. Concentrations of ٥٠٠ and ٦٠٠ µg/ml bath apramycin caused complete relaxation of uterine motility at oestrous and late pregnant phases, but at anoestrous and early pregnant phases concentration ٥٠٠ µg/ml bath apramycin induced a marked inhibition in the force and frequency of contraction, while complete relaxation of uterine motility occur at concentration of ٦٠٠ µg/ml bath apramycin. The site of action of action of apramycin on uterine motility was proved to be myogenic in nature.

Apramycin produced a relaxation of the guinea pig's tracheal chain.

Apramycin has no effect on the vascular smooth muscles either on the rat's splenic capsule or on the rabbit's aortic strip. Moreover noradrenalin failed to produce its stimulant effect in the presence of the drug. These results revealed the presence of alpha antagonist activities of apramycin.

٢.Effects on the cardiac muscles:-

Apramycin in a concentration lower than ٢٠٠ µg/ml bath had no effect on isolated guinea pig's auricle. Concentrations of ٢٠٠ and ٤٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Concentrations of ٦٠٠ and ٨٠٠ µg/ml bath caused a marked inhibition in the force of contraction. Complete relaxation was achieved by a concentration of ١٠٠٠ µg/ml bath apramycin. This study proved that, apramycin had a myogenic effect on guinea pig's auricle.

Apramycin in a concentration lower than ٤٠٠ µg/ml bath had no effect isolated toad's heart, concentrations of ٤٠٠-٦٠٠ µg/ml bath caused a slight inhibition in the force of contraction. stronger concentrations (٨٠٠-٢٠٠٠ µg/ml bath) caused a marked inhibition in the force. Complete relaxation was produced by addition of ٣٠٠٠ µg/ml bath apramycin.

Apramycin in a concentration of ١٠٠-٤٠٠ µg/ml canula had no effect isolated rabbit's heart. Graded concentrations ٦٠٠-٦٠٠٠ µg/ml canula induced cardio-inhibitory effect. The concentrations of ٦٠٠-١٠٠٠ µg/ml canula induced a slight inhibition in the force of contraction; from ٢٠٠٠-٣٠٠٠ µg/ml canula induced a marked inhibition in the force of contraction and ٦٠٠٠ µg/ml canula caused complete inhibition in the force. This action of apramycin was not

attributed to the B adrenergic blocking effect or to cholinergic stimulant effect.

٣.Effects on skeletal muscles:-

Apramycin in a concentration lower than ٤٠٠ µg/ml bath had no effect on the rectus abdominis muscle preparation. Meanwhile, apramycin in concentrations of ٤٠٠-٦٠٠ µg/ml bath caused slight muscular blockade in the presence of acetylcholine. Concentration of ٨٠٠ µg/ml bath caused marked muscular blockade. Complete muscular blockade produced in the presence of ١٠٠٠ µg/ml bath apramycin.

Apramycin in a concentration lower than ٦٠٠ µg/ml bath had no effect on the gastrocnemus muscle preparation. Meanwhile, apramycin in concentrations of ٦٠٠-١٠٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Concentrations from ٢٠٠٠ to ٤٠٠٠ µg/ml bath caused a marked inhibition in the force of muscular twitch of frog's gastrocnemus muscle which was less potent than that induced by procaine hydrochloride ٢٪.

Apramycin in a concentration lower than ٨٠٠ µg/ml bath had no effect on the biventer cervicis muscle preparation. Meanwhile, apramycin in concentrations of ٨٠٠-٢٠٠٠ µg/ml bath caused a slight inhibition in the force of contraction. Concentrations of ٣٠٠٠ and ٤٠٠٠ µg/ml bath caused a marked inhibition in the force of contraction. Neostigmine methyl sulfate is unable to reverse the neuromuscular blocking activity of apramycin; meanwhile calcium chloride antagonizes the neuromuscular blockade produced by this antibiotic.

٤.Effects on blood pressure and respiration:-

Apramycin in a dose of ٤٠ mg/kg b.wt. and ٨٠ mg/kg b.wt. produced a hypotensive effect and marked decrease in respiratory rate

in anaesthetized dogs. The hypotensive effect of apramycin was proved to be neither of an alpha antagonist nor B٢ agonist adrenoceptor activity. A possibility of histamine-like effect and/or histamine release was excluded. A possibility of acetylcholine-like effect was also excluded. Meanwhile, the effect might be attributed to its direct myogenic effect.

٥.Effect on the electrocardiogram pattern (ECG):-

Intravenous injection of the therapeutic dose of apramycin (٤٠ mg/kg) or double therapeutic dose (٨٠ mg/kg) produced a significant decrease in the heart rate, a non significant increase of P-R interval, a non significant increase of the QRS complex, a significant decrease of the ST segment, a significant decrease of the T wave, a non significant increase of the p wave with the first dose and a significant increase with the second dose and no effect on the QT interval. The effect might be attributed to its direct effect.

قسم الفيرولوجيا

دراســات على تحضير أجسـام منـاعية تشخيصية لبعض فيروســات الدواجــن

STUDIES ON PREPARATION OF DIAGNOSTIC ANTISERA AGAINST SOME AVIAN VIRUSES

نورا فيصل مرسى عبد العزيز الخليفة

SUMMARY

The present study was designed to prepare NDV, IBV and IBDV anti sera conjugated with fluorescein isothiocyanate and hors radish peroxidase to be available on request as local products saving time and cost.

The experimental results revealed that:

١- The applied serological tests showed that NDV antibody titers were ٩ log٢; ٨log٢ and ٨log٢ in chicken serum; ٨log٢; ٧log٢ and ٨log٢ in duck serum; ٨log٢, ٧log٢ and ٧log٢ in rabbit serum and ٩log٢, ٩log٢ and ٧log٢ in goat serum as estimated by HI, SNT and AGPT respectively showing that the highest titers were detected in chicken and goat sera.

IBV antibody titers were found to be ٩log٢ by SNT and ٨log٢ by AGPT in chicken serum; ٤log٢ by SNT and ٣log٢ by AGPT in duck serum; ٨log٢ by SNT and ٦log٢ by AGPT in rabbit serum and ٧log٢ by SNT and ٦log٢ by AGPT in goat serum.

On the other side, IBDV antiserum showed antibody titers of ٨log٢ by SNT and AGPT in chicken serum; ٧log٢ by SNT and ٦log٢ by AGPT in duck serum; ٨log٢ by SNT and AGPT in rabbit serum and ٧log٢ by SNT and AGPT in goat serum.

٢-Estimating serum proteins in the prepared hyper immune sera; it was found that in NDV anti sera the total serum protein, albumin and globulin showed the values of ٥.٥±٠.٢٣, ٢.٠١±٠.٣٣ and ٣.٤٩±٠.١٠ g/dl in chicken serum; ٦.٤±٠.٠٩, ٢.٣٠±٠.٣٢ and٤.١±٠.١٩g/dl in duck serum; ٥.٨٠±٠.١٢, ٢.٥١±٠.١١ and ٣.٢٩±٠.٢٢g/dl in rabbit serum and ٥.٣٢±٠.٢١, ١.٧٩±٠.٣٢ and ٣.٥٣±٠.١٠g/dl in goat serum respectively.

IBV anti sera were found to have the values of total protein, albumin and globulin of ٥.٢±٠.١٣, ١.٥±٠.٠٣ and ٣.٧±٠.٢٢g/dl respectively in chicken serum; ٦.٥±٠.١٢, ١.٩±٠.٢٤ and ٤.٦±٠.٣٢g/dl respectively in duck serum; ٥.٧٩±٠.٣٠, ٢.٢٣±٠.١١ and ٣.٥٦±٠.٢٣g/dl respectively in rabbit serum and ٥.٦١±٠.١٤, ١.٨٠±٠.٢٣ and ٣.٨١±٠.٢١g/dl in goat serum respectively.

Chicken IBDV antiserum was found to has ٥.٨±٠.٠٥, ١.٥±٠.٢٣ and ٤.٣±٠.١١g/dl of total protein, albumin and globulin respectively. Duck IBDV antiserum had the values of ٦.٧±٠.٢٢, ٢.٠±٠.١٠ and٤.٧±٠.٤٤g/dl of total protein, albumin and globulin respectively. Values of ٥.٣٧±٠.١٩, ٢.٠٠±٠.١٧ and ٣.٣٧±٠.١٣g/dl were determined for total serum protein, albumin and globulin respectively in rabbit anti IBDV serum while the corresponding values in goat anti IBDV serum were ٥.٥٠±٠.٠٥, ١.٩٠±٠.٠٨ and ٣.٦٠±٠.٤٠g/dl respectively. Generally the prepared anti sera showed higher values of total proteins and globulin with decrease in albumin levels than in control hosts.

٣-NDV-FITC conjugated anti sera showed positive fluorescent apple green reactions up to a dilution of ١:١٠٠٠٠ for chicken and duck conjugates and ١:١٠٠٠٠٠ for rabbit and goat conjugates.

FITC conjugated anti-IBV sera showed positive reactions up to ١:١٠٠٠٠ for chicken conjugate; ١:١٠٠٠ for duck conjugate and ١:١٠٠٠٠٠ for rabbit and goat conjugates.

The prepared anti IBDV sera conjugated with FITC revealed positive reactions up to a dilution of ١:١٠٠٠٠٠ for chicken; ducks and rabbit conjugates and ١:١٠٠٠٠٠٠ for goat conjugate.

٤-Among the evaluation results of the prepared anti ND virus hyper immune serum conjugated with horse radish peroxidase using direct ELISA, it was found that positive results were obtained with conjugate dilution of ١: ٥٠٠; ١:٤٠٠; ١:٥٠٠ and ١:٤٠٠ for chicken; duck; rabbit and goat conjugates respectively..

IBV antisera conjugated with horse radish peroxidase showed positive results up to dilutions of ١:٥٠٠ for chicken and rabbit conjugates and ١:٤٠٠ for duck and goat conjugates.

Conjugated IBDV antisera with horse radish peroxidase showed positive results up to dilutions of ١:٥٠٠ for chicken and rabbit sera and ١:٤٠٠ for duck and goat sera.

استجابة الكتاكيت الرومية المناعية لبعض اللقاحات الفيروسية
MMUNE RESPONSE OF TURKEY CHICKS TO SOME VIRAL VACCINE

سماح السيد على ابو دلال

ABSTRACT

The present study was planned to evaluate and investigate the effect of the inactivated AI and ND vaccines on the immune response of Turkey chicks. Three hundred one-day bronzy turkey chicks (Broad Breasted Bronze) were obtained from Mehallet Moussa Turkey Research Station, Kafr El-Sheikh Governorate, belonging to the Animal Production Research Institute, Ministry of Agriculture. These birds were reared under hygienic measures and divided into ٦ groups (٥٠ birds/ group), vaccinated with ND vaccines and inactivated AI as follow:

Group-١ was vaccinated at ٦-day old with ND Hitchner B١ eye drop vaccine with ٠.٥ml S/C injection of AI vaccine.

Group-٢ was vaccinated with ND Lasota vaccine at ١١-day old in drinking water with ٠.٥ml S/C injection of AI vaccine.

Group-٣ was vaccinated at ٢٥-day old with the inactivated ND vaccine using ٠.٧ml injected S/C with ٠.٥ml S/C injection of AI vaccine.

Group-٤ was vaccinated at ٧-day old with ND Hitchner B١ eye drop vaccine and on the ٢٤th day of age this group was vaccinated S/C with the inactivated ND vaccine.

Group-٥ was vaccinated on the ١٨th day of age with ٠.٥ml of the inactivated AI vaccine ($H^{٥}N^{٢}$) through the S/C route then boostered with another dose at ٤ months of age using a dose of ١ml/bird for females and ٢ml/bird for males.

Group-٦ was kept without vaccination as control.

قسم كيمياء حيوية

تأثير زيت بذرة القطن المغلى على نمط الدهون والجلوبيولين المناعى ومضادات الأكسدة فى امصال الفئران

EFFECT OF BOILED COTTON SEED OIL ON LIPID PROFILE, IMMUNOGLOBULIN AND ANTIOXIDANTS IN SERA OF RATS

الصافى عبد الله الشاذلى

SUMMARY

The objective of this study was to investigate the effect of boiled cotton seed oil by frying on the following biochemical parameters in mature male albino rats:

- Serum total lipid
- Serum total cholesterol
- Serum triacylglycerol.
- Serum high density lipoprotein-cholesterol (HDL-C).
- Serum low density lipoprotein-cholesterol (LDL-C).
- Serum Immunoglobulin E (IgE).
- Blood reduced glutathione (GSH).
- Blood superoxide dismutase activity (SOD).

Experiment:

Healthy mature male albino rats (٢٦٠) were used in the present study. Their weights ranged from ٨٠ to ١٠٠ g. Through the study, all rats were kept on basal ration formulated according to National research council (NRC) recommendation for ٢ weeks and water ad libitum, the animals grouped into ٣ groups:

Group I: Comprised ٢٠ rats maintained on basal ration and kept as control group.

Group II: Non boiled cotton seed oil group comprised ٤٠ rats maintained on basal ration mixed with non-boiled cotton seed

oil at a level of ٥٠ mg/kg ration (٢٠ rats) and ١٥٠ mg/kg ration (٢٠ rats).

Group III: The boiled cotton seed oil group comprised ٢٠٠ rats maintained on basal ration mixed with:

a. boiled cotton seed oil ٥٠ mg/kg ration (١٠٠ rats) subdivided into ٥ sub groups according to the time of oil heating ٦, ١٢, ٢٤, ٤٨ and ٧٢ hrs (٢٠ rats in each sub group).

b. Boiled cotton seed oil ١٥٠ mg/kg ration (١٠٠ rats) subdivided into ٥ sub groups according to the oil heating time ٦ h, ١٢ h, ٢٤ h, ٤٨ h and ٧٢ hrs (٢٠ rats in each sub group).

Blood sampling:

The blood samples were collected from animals after overnight fasting from the medial canthus of the eye using heparinized hematocrite tube into centrifuge tube. Each collected blood sample was divided into two main portions. The first portion was left to coagulates at room temperature for one hour then centrifuged at ٣٠٠٠ r.p.m for ١٥ minutes to separate serum samples.

The clear non-hemolyzed serum samples were separated and kept frozen at -٢٠^{o}C till analysis of serum total lipids, serum total cholesterol, serum triacylglycerol, serum high density lipoprotein-cholesterol (HDL-C), IgE and serum low density lipoprotein-cholesterol (LDL-C) and serum IgE.

The second portion of blood was mixed with potassium salt of EDTA (١٥ g/dl), ١٠ µl were used for ١ ml blood. This portion was used for determination of blood reduced glutathione (GSH) and blood superoxide dismutase activity (SOD).

قسم مراقبة الأغذية

مدى تواجد وأهمية الميكروبات العصوية المعوية فى الألبان وبعض منتجاتها

OCCURRENCE AND SIGNIFICANCE OF ENTEROBACTERIACAE IN MILK AND SOME DAIRY PRODUCTS

نهلة أحمد عبد الوهاب عبيد

SUMMARY

Two hundred random samples (١٠٠) raw milk, (٥٠) ice cream and ٥٠ yoghurt low scale & large scale ٢٥ sample for each. Small dairies, groceries and supermarkets from different localities were collected from at Kafr El-Sheikh Governorate. The collected samples were transferred directly to the laboratory with a minimum of delay where they were prepared and examined.

Collected samples were subjected for physical examination, quality examination and microbiological examination.

The results can be summarized as follows:

١. **Titratable acidity:**

The mean values of acidity percent in examined raw milk samples were ٠.١٩٧ ± ٠.٠٠٩.

The mean values of titratable acidity in yoghurt samples were ١.٢٤ ± ٠.٠٨ and ٢.٤٢ ± ٠.١٣ in the examined samples of small scale and large scale plain yoghurt, respectively.

٢. **Enterobacteriaceae count:**

a. Raw milk:

Enterobacteriaceae were detected in ٨٤٪ of the examined samples.

The mean value of Enterobacteriaceae count of examined raw milk samples were ١.٠٢ x ١٠^{٦} ± ١.٩٨ x ١٠^{٥}.

The enteric bacteria isolated were Hafnia alvie (٣٠.٩٥٪), Serratia liquefaciens (٢٥.٠٪), Kl. pneumoniae (١٥.٤٨٪), Kl. oxytoca (١١.٩٪), Ent. aerogenes (١٣.١٪), Proteus vulgaris (١٣.١٪), Serratia marcescens (١١.٩٠٪), Proteus rettgerii (١١.٩٪), Escherichia coli (٩.٥٢٪), Providencia rettgeri (٩.٥٢٪), Citrobacter

diversus (٣.٥٧٪), Proteus morganii (٢.٣٨٪), Providencia alcalifaciens (٢.٣٨٪), Citrobacter freundii (٢.٣٨٪), Shigella flexnerii (٢.٣٨٪), Shigella sonnie (٢.٣٨٪), Ent. cloacae (١.١٩٪), and Yersinia enterocolitica (١.١٩٪).

b. Yoghurt:

Enterobacteriaceae were isolated from ٤٠٪ and ٣٢٪ of examined samples of small scale and large scale plain yoghurt respectively. The corresponding mean values of Enterobacteriaceae counts were ٦.٩٥ x ١٠^{٣} ± ٤.٠٠ x ١٠^{٣} and ١.٥٧ x ١٠^{٣} ± ٨.٩٥ x ١٠^{٢}, respectively.

The Enterobacteriaceae members isolated were E. coli (٤٤.٤٤٪), Serratia liquefaciens (٢٧.٧٨٪), Shigella flexnerii (٢٢.٢٢٪), Shigella sonnie (٢٢.٢٢٪), Kl. pneumoniae (٢٢.٢٢٪), Hafnia alvie (٢٢.٢٢٪), Serratia marcescens (١١.١١٪), Ent. aerogenes (١١.١١٪), Providencia staurtii (١١.١١٪), Edwardsiella hoshinae (١١.١١٪), Proteus morganii (١١.١١٪), Proteus rettgerii (٥.٥٦٪), Ent. cloacae (٥.٥٦٪), and Citrobacter diversus (٥.٥٦٪).

c. Ice cream:

Enterobacteriaceae were isolated from ٦٤٪ and ٢٠٪ of the examined samples of small scale and large scale plain ice cream, respectively. The corresponding mean values of Enterobacteriaceae counts were ١.٠٢ x ١٠^{٤} ± ٤.١٣ x ١٠^{٣} and ١.٤٠ x ١٠^{٣} ± ٨.٢٦ x ١٠^{٢}, respectively.

The Enterobacteriaceae members isolated were Serratia marcescens (٥٧.١٤٪), Escherichia coli (٣٣.٣٣٪), Kl. pneumoniae (٢٣.٨١٪), Hafnia alvie (٢٣.٨١٪), Citrobacter diversus (١٩.٠٥٪), Ent. aerogenes (١٩.٠٥٪), Kl. ozaenae (٩.٥٢٪), Citrobacter freundii (٩.٥٢٪), Shigella flexnerii (٩.٥٢٪), Proteus rettgerii (٩.٥٢٪), Serratia odorifera (٤.٧٦٪), Ent. cloacae (٤.٧٦٪), Shigella sonnie (٤.٧٦٪), and Proteus vulgaris (٤.٧٦٪).