Results: All of the tree different 5 Nitroimidazole derivates commercial drugs were able to reduce %50 of the viable trophozoites after 24 hours with metronidazole at 0.78-1.56 μg/ml; while two different ornidazole at 6.25 μg/ml concentrations. In the essential oils, only *Origanum vulgare subsp.hirtum* was able to reduce 50% viable trophozoites in first 24 hours. There was over all little difference in the reduction of %90 of the viable trophozoites between ornidazoles which is 12.5 μg/ml and 12.5-25 μg/ml respectively though the %90 reduction of trophozoite viability was at 25 μg/ml for metronidazole. Essential oils reduced %90 of the viable cells at concentrations between 50-100 μg/ml. After 24 hours complete inhibition of viability (EC100) was at 25 μg/ml for ornidazole while it was higher for metronidazole and ornidazole. *Origanum vulgare subsp.hirtum* essential oil inhibited the trophozoites totally at 50 μg/ml; while the total inhibition of growth by tea oil was given after 48 hours at 100 μg/ml. Carvacrol%100 inhibitory concentration was >100 μg/ml.

Conclusion: These data suggest that *Origanum vulgare subsp.hirtum* oil may be a good candidate for treating trichomoniasis and that further investigation of this drug is warranted

http://dx.doi.org/10.1016/j.ijid.2016.02.772

Type: Poster Presentation

Final Abstract Number: 43.033
Session: Poster Session III
Date: Saturday, March 5, 2016
Time: 12:45-14:15
Room: Hall 3 (Posters & Exhibition)

Increased transcriptional level of the H2-T23 (Qa1) and H2-Q7/Q9 (Qa2) genes during acute infection induced by two strains of Trypanosoma cruzi

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Background: Qa1 and Qa2 are non-classical MHC class Ib immunomodulatory murine molecules that exhibit high structural homology to their human functional homologs HLA-E and HLA-G, respectively. These molecules present restricted constitutive tissue expression, and little attention has been devoted to their role on infections.

Methods & Materials: In this study, we analyzed by qRT-PCR the transcription profiles of genes encoding Qa1 (*H2-T23*) and Qa2 (*H2-Q7/Q9*) molecules in heart from BALB/c and C57BL/6 mice during *Trypanosoma cruzi* experimental acute infections induced by Y or CL strains.

Results: Compared to non-infected mice, the heart expression of *Qa1* and *Qa-2* in BALB/c mice was 17-fold and 21-fold increased, respectively, while in C57BL/6 mice the transcription levels of *Qa1* and *Qa2* were 16- and 15-fold higher, respectively, during Y strain infection. For CL strain infection, the heart expression of *Qa1* and *Qa2* in BALB/c was 30- and 28-fold higher than the control group, respectively. In addition, the transcription levels of *Qa1* and *Qa2* was 24- and 25-fold increased in infected C57BL/6 mice compared to non-infected group.

Conclusion: Taken together, both infected BALB/c and C57BL/6 mouse strains exhibited increased Qa1 and Qa2 heart expression, independently of the *T. cruzi* strain, and it was not related to resistance (C57BL/6) or susceptibility (BALB/c) to the acute *T. cruzi* infection. Considering that Qa1 and Qa2 are immunoregulatory molecules that inhibit NK and T $CD8^+$ cells, the increased expression of these molecules may be interpreted as an attempt of the host to protect cardiac fiber destruction, controlling the inflammatory process, cytolysis and fibrosis.

http://dx.doi.org/10.1016/j.ijid.2016.02.773

Type: Poster Presentation

Final Abstract Number: 43.034
Session: Poster Session III
Date: Saturday, March 5, 2016
Time: 12:45-14:15
Room: Hall 3 (Posters & Exhibition)

Liver parasites of cattle slaughtered in Onitsha urban and environ, Southeast Nigeria

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Background: The rate of infection and the extent of damage of liver by parasites in cattle slaughtered in Onitsha and environ south east Nigera were investigated from October to December, 2014. The question then was which parasites were involved and was there any economic loss as a result of the parasitic infections.

Methods & Materials: The study involved postmortem inspection on the slaughtered cattle. The livers were examined by making length wise incision on the ventral side, in such a way as to open up the gall bladder and the bile duct. Macroscopic changes in the liver were observed and their economic importance noted.

Results: Out of a total of 2010 cattle examined 273(13.6%) were infected. Infection rates were 14.2, 13.6, and 13.2%, for the months of October, November and December respectively. Two types of flukes, *Fasciola gigantica*(12.0%) and *Dicrocoelium hospes*(1.1%) were identified along with hydatid cysts(0.5%). There were mixed infections of *F. gigantica* and *D. hospes* and also of *F. gigantica* and hydatid cysts. Infected liver showed thickening of the bile ducts and cirrhosis. In very heavy infections, the bile turned dark-green and more viscous than normal light green colour. The total weight of livers condemned by parasitic infection during the period was 675.7kg. Condemned liver due to *F. gigantica* was 524.5kg and that due to *D. hospes* was 133.7kg. A kilogram of liver was sold at $8, thus the total amount lost due to liver condemnation was $5,405.6.

Conclusion: The parasites found contributed to a remarkable economic loss due to liver condemnation. The nomadic management practiced by cattle rearers in Nigeria could aid infection. Very poor meat inspection facilities and uncooperative attitude of butchers were observed. Prompt chemotherapy of live animals is necessary. Restricting and feeding of the treated animals with hays before they are slaughtered is recommended.

http://dx.doi.org/10.1016/j.ijid.2016.02.774