View of Western Siberian Indigenous peoples on Opisthorchiasis

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Opisthorchiasis felineus

Cat liver fluke
or Siberian liver fluke
Transmission cycle

Opistorchiasis as a disease in humans
Metorchis bilis

Very similar to Opisthorchis felineus.

Causes metorchiasis – very similar disease very close to opisthorchiasis in symptomatology

Endemic regions somewhat overlap.
The prevalence of Opisthorchiasis felineus infection in Russia

Distribution of opisthorchiasis infection (%) among population in different regions of Western Siberia in 2013 yr (prevalence is calculated of the number of cases per 100 000 of population).
Prevalence of opisthorchiasis among the indigenous people
Typical indigenous food in Western Siberia
Fish as a food
History of opisthorchiasis in Western Siberia

- Opisthorchiasis has been present in at least some areas for centuries.
- Archaeological excavations in Iron Age Ust-Poluy, medieval Zeleniy Yar - rich in fish deposits.
- Opisthorchiasis found in 1 year old infant remains from the medieval Zeleniy Yar burial ground of XII-XIII centuries AD.
- Opisthorchiasis not found in some sites, such as XVII-XIX centuries Selkup Kikki-Aikki burial site.
- In year 2013, law has passed that testing and treatment for opisthorsiasis is obligatory for some professions (medicine, pedagogy, food processing etc.)
Our research - view of Western Siberian Indigenous peoples on Opisthorchiasis

- We carried out semi-structured interviews and questionnaires with people of indigenous background in Khanty-Mansi autonomous okrug.
- Opisthorchiasis is generally regarded as mild disease by indigenous peoples.
- ”People lived to 90 and 100 years with all opisthorchiasis”.
- There is no specific word for opisthorchiasis in Khanty language.
- There is a widespread opinion, that indigenous peoples have more genetic resistance to opisthorchiasis than immigrant population.
- Different opinions on complimentary medicine. Some people regard treatments as ”toxic”, whereas others regard them as ”necessary”.
- We have heard an opinion that treatments involving endoscopic tubes has lead to death of many people – 5-6 years after treatment.
Treatments involving endoscopic tubes
Other respondent answers

- All respondents knew opisthorchiasis.
- Majority of people have learned about opisthorchiasis from parents in family settings, but some have learned about the disease in school.
- Almost everybody eats fish very frequently (traditional staple food) and often in raw or undercooked form.
- Some respondents have had the disease, and everybody knows other people who have contracted the parasite.
- Different opinions on whether disease has increased or decreased nowadays.
Indigenous knowledge on prevention and treatment options for opisthorchiasis

- Thermal processing of fish (boiling, freezing, frying), salting.
- Thorough washing of hands, dishes and surfaces that have come in contact with fish and disinfection.
- Bog sphagnum is said to be good natural antiseptic for cleaning surfaces.
- Local medicine can help alleviate opisthorchiasis – swallowing of gallbladder of pike, drinking extract of pine nuts on alcohol, or extract of aspen bark.
Conclusions

- Prevalence of opisthorchiasis is extremely high among the indigenous peoples due to raw diet and natural endemic area.
- It has existed at least several centuries in Western Siberian areas.
- Local indigenous people regard it as mild disease.
- Mistrust to complimentary medicine, critical attitude to medical treatments in hospitals.
- Some similar results obtained in Zvonareva et al (2017) work (“Life by the river: neglected worm infection in Western Siberia and pitfalls of a one-size-fits-all control approach”), where qualitative study has been carried out in Tomsk region.
Research needs

- Possible symbiosis between opisthorchiasis and human body?
- Genetic resistance to opisthorchiasis?
- Medical treatment side effects, including death?
- One model fits all?
Thank you for your attention.
Be healthy!