

Incidences of Helminth Parasites in Fresh Water Fishes of Arjun Sagar Dam M. S. India

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Abstract

The study of helminth parasites in 12 fresh water fishes from Arjun Sagar dam were collected from six different sites of the Arjun Sagar for study out of total collected fish 100 male and 65 female fishes were found infected with helminth parasites with 47.61% prevalence in male fish and 45.14% prevalence in female fish. Helminth parasite prevalence was mostly shown in fishes, which collected from polluted area. Changing environmental condition in their habitat, may leads to the increase of parasitic infection.

Keywords: - Parasites, fish specis, Arjun Sagar , Infection, Prevalence

Introduction

Fishery provide good economical option to the Indian agriculture, hence rapid increase in takes place in the fisheries and aquaculture parasites. Change in environmental condition may lead to the change the physiological activities of fishes or fish health. Studies shows that the creation adequate changes in the environment of the fishes may leads to certain emerging health issue such as genetic disorders pathogenic infections parasitic pathogens directly affect the fish production and indirectly they are responsible for the decrease in the economy. Parasite can be observed in almost all the living organisms and made equilibrium in the aquatic organism (Macgillivray 2008) parasitic infections in the fish directly lead to the loss of fish production. They made several mechanical damages on fish gills or lamellae they may destroy cells (Toksen,2007) In severe case the specific organ (cordia 1956). Parasitic infection may leads to the physiological changes in fishes. (Okaeme et.al,1987) most of the fish belonging to the family Bagridae, caridiidae, schilibeidae etc. have been reported to cestode (Jadhav 2010) large amount of Arjun Sagar monsoon due to which river drying at an alarming rate secondly productive agricultural land around Arjun Sagar pollute through surface run off changes in environmental conditions may lead to the change the physiological activities of fishes or fish health. The physiological activities of fishes or fish health. The outbreak of the disease may leads to the increase of the parasitic activity which made adverse effects on fisheries. Current study helps to understand the availability of fishes and parasitic infections. The study helps to understand the availability of fishes and parasitic infections. The study further helps in resolving or managing such kind of parasitic activities.

Material and Methods

The study of helminthes parasites in fish species available in Arjun Sagar was durin monsoon season. Accounting to sources of contamination the 20 kim. Arjun Sagar was divided in to Girna river to Behdi river. The fish species available in the Arjun Sagar was collected with help of local fisherman. Cast, Net Drag Ntet, Gill Net, etc are used dring the fishing different type pf fish than a direct fishing. The body parts were collected by visiting weekly markets organized in Arjun Sagar Girna river and Behdi river. Fish species are and their body parts were collected by visiting weekly markets organized in Arjun Sagar. Body parts such as local venders situated along with Girna river. Body parts such as intestine swimming bladder, gills etc. were collected weekly for taxanomy identification of fish it is necessary to know salient characters of fishes which helpful for the classification and identification of the fish species. These identification characters are may be used for their classification (joshi and sreekumar 2015). The cycles stand protocol (Jayaram K.C.1981) Hiware C. J. et. al., (2015). All the collected species and body parts bring to the laboratory for the collection of parasites from gill. Lever, Inteshine and muscles. The fish specimens and body parts are collected according to their six. The each fish and their body parts evidences. The gills are dissection out in to the Petridis for careful observation for parasites.

Parasites following formula used.

$$\text{Prevalence (\%)} = \frac{\text{No.of infected fish} \times 100}{\text{Total No of Fish examind}}$$

$$\text{Intensity (\%)} = \frac{\text{No.of Parasites collected}}{\text{No.of.fish Infected}}$$

$$\text{Abundance (\%)} = \frac{\text{No.of.Parasites collected}}{\text{No.of fish Infected}}$$

Result and discussion

Prevalence of Helminthes in different fish species collected at Girna river during monsoon season was recorded Table No.1 and Table No.2 Total 345 fish were collected and examined for the six and parasitic evidence. Out of the total collected fish 210 fish was identified as female out of the total collected males 100 were found infected with different types of parasites total 267 parasites were collected. 47.61% prevalence of Helminthes parasites in male fish were in the total male fish.

Oreochromis nilotcus (7), catla catla (7) cirrhinus cirrhinus (6). Piaractus brachypomus (8) macrognatus pan calus (4), wallaago attu (6) and pangasianodon hypophthalmus (6) were number of infected fish species was clarias batrachus (11), Labeo Pangusia (10), Labeo rohita(10), channa marulius (10), Temualosa toil (15), Among the male fish species Temalosa toil found with higher number of infected Individual. While the male species of marognathus panculus has less number of infected individuals.

Out of the total collected fish species 65 female fish were found infected with different types of parasites. Total 174 parasites were collected from 65 infected fish species with 48.14% prevalence of helminthes parasites. Channa marullus (5) clarlas batrachus (3) Lbeo pangusia (5) cirrhosus (4) Macrognathus pancalus (3) and wallagoattu(4) found with lowest number of infected individuals in female fishes while piaractus brachypomus (6), Oreochromisniloticus

(8), *Tenualosa toil* (9) *Labeo vohita*(7), *Pangasiandon hypothalamus* (6) were found with higher number of infected individuals. The male fishes *Tenualosa toil* (65.2%) lowest prevalence observed in *oreochromis niloticus* (30.5%) followed by *cirrhinus* (35.2%) and *hypothalamus* (37.5%) while among the female fishes highest prevalence was observed in *laborahita* (81.8%) and *piaractus brachypomus* (54.4%) and lowest prevalence. According to him the observe environmental conditions are responsible for the parasitic prevalence *koiri* and Roy (2016) studies prevalence of *Tripura*. At peak level during monsoon season. Khurshid and Ahmed (2014) recorded moderate prevalence of parasites on some freshwater fish of river *sindhu* in Kashmir. Upadhyay et al, (2012) studies percent prevalence of parasites in cyprinid fish *labeo rohita* at river *song* in *doon valley*, *Utterakhand*, During monsoon season 52.77% prevalence of parasites were recorded followed by 22.2% prevalence during post monsoon season. As compare to other season highest percentage of prevalence was recorded in July to August months of monsoon season.

Conclusion and Future Scope It is infected that the contamination of the aquatic environment can even affect the prevalence and intensity of the infestation of fish with multicellular endoparasites. And ectoparasites. In such cases pollutants can act either on the intermediate host or directly on the host (fish) organism and can also affect the associated defence mechanism and immune responses. In water bodies with heavy pollution together with high prevalence of parasites poor state of fish health can be the result of enhanced effects of the parasites on fish harmed by the direct of the parasites on fish harmed by the direct effects of pollution, rather than of the primary effect of the parasites themselves.

Aquatic ecosystem especially water bodies with poor environmental condition that can on populations. Environmental stresses can depress host immunity fish become more susceptible to infections and these can become more severe even total.

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