萬頜江流域水系의淡水魚에 寄生하는吸蟲類被囊幼蟲調査

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李宰求·李浩一·白秉杰·金平吉

緒論


그러나, 全北 県南郡及 水原市 水原郡 水間地帶에서 採取하여 大種川 및 延慶潭池에 가까이 추어한 한 支流와 한국으로는 全北 県北郡의 水間地帶에서 採取하여 추어한 또 하나의 支流가 師範에서 資料로한 支流를 이어가서 웃음, 延慶, 金堤 및 洪城郡의 肥沃한 平野部를 資料로한 黃海沿に入힌是萬頜江 流域 水系에 懸息하는淡水魚에 對해서는 岳(1951)와 1974年에 寄協(1978)이 肝吸蟲被囊幼蟲을 檢出, 報告한 것을 바탕으로 한다. 그러나 著者 등은 萬頜江 水系의 懸息하는淡水魚로부터 吸蟲類の各種被囊幼蟲을 檢出하였기에 記載하고자 한다.

材料及方法

著者等(李等, 1983)이 "萬頜江流域에 있어서肝吸蟲症의 資料的 調査"에서 調査材料를 使用한 淡水魚로부터 역시 같은 方法를 適用하여 吸蟲類의各種被囊幼蟲을 檢出하였다.

結果

萬頜江流域水系로부터 採集한 32種 380마리의淡水魚에 寄生하는吸蟲類의各種被囊幼蟲 感染率는Table 1에 表示한 바와 같다. 즉, 32種 380마리의淡水魚 중 鄭家魚(Pelobates fuscipes)를 除外한 31種 320마 리(84%)로부터 吸蟲類의各種被囊幼蟲이 檢出되었는데, 가장 많은 鯉의 幼蟲이 檢出된 魚種은 鱸어로로서 10種 以上이며, 가장 적은 것은 1種으로서 백남물개(Pseudoperiplanum notatus) 등 4種이었다. 그리고 各種被囊幼蟲의 側面에서 全體의淡水魚에 寄生한 吸蟲類을 보다면 感染率가 가장 높은 것은 Exorchis oviformis의 幼蟲로서 28種 261(57%)에, 가장 낮은 것은 Echinocostus japonicus로서 2種 2마리(0.5%)이었다.

한편, 種을 同定할 수 없는 및 가지 幼蟲이 15種 34마리(9%)의淡水魚에 寄生하고 있었다.

各種淡水魚體에 대한g當各種被囊幼蟲의 平均數(以下MPG라고 略歴)를 計정한 結果는 Table 2에 表示한 바와 같다. 즉, 各種淡水魚에 있어서 모든被囊幼蟲의 MPG는 資料mp 83, 水果魚(Cobitis taenia) 74.2, 植物魚(Aphryopris chinensis) 28.5, 植物魚(Pseudoperiplanum ueyeki) 26.6 및 水果魚(Gnathopogon majiic) 19.6의 증가되어 있으며 가장 낮은 것은 난들개(Pseudoperiplanum suigenis)로서 0.4이다.

그리고,淡水魚의側面에서 各種被囊幼蟲のMPG가 높았던 것은 水果魚에서에서 Cyathocotyle orientalis 43.7, 植物魚(Trimetopus yokogawaii) 25.1, 植物魚에서에서 E. oviformis 24, 肝吸蟲 21.7, Metorchis orientalis 15.3, C. orientalis 10.8, 가시나무작(Acanthorhodeus gracilis)에서에서 E. oviformis 12.1이었다.

考察

著者(1920)가 論文, 韓鰭河及 延慶潭池에서 懸息어, 增殖魚(Sarcochilichthys czerskii), 資料(Gnathopogon coreanensis) 및 資料(Abbottinia riciparlis)으로부터 肝吸蟲被囊幼蟲을 最初로 檢出하여 報告한 것을 起源으로 하여 그동안 수많은 學者들에 의하여 全國 水域 河川에 懸息하고 있는 많은淡水魚로부터 肝吸蟲被囊幼蟲이 檢出報告하고 있다.

然而,肝吸蟲以外의 吸蟲類被囊幼蟲에 대하여는 鈴木(1925)는 木地衆받(Mugil cephalus)과 가슴어(Liza haematoticeps)로부터 異形吸蟲에 속하는 幼蟲을, 延慶潭池에서 資料으로 懸息하는 幼蟲의 腹部에서 異形吸蟲(Heterophyes heterophyes)과 同一

한形態를 지니는 幼蟲을 各處 見得 있었다. 高本高橋(1929)는 慶南 保寧郡 慶川面에서 5月에 数千마리의 6~
### Table 1. Infestation rates for digenetic trematode metacercariae from fresh-water fishes caught in Mangyeong riverside area

<table>
<thead>
<tr>
<th>Species</th>
<th>Weight (Mean, g)</th>
<th>No. exam.</th>
<th>Cs (%)</th>
<th>Eo (%)</th>
<th>Co (%)</th>
<th>Mo (%)</th>
<th>My (%)</th>
<th>Pm (%)</th>
<th>Mh (%)</th>
<th>Ca (%)</th>
<th>Ej (%)</th>
<th>Un (%)</th>
<th>Negative (%)</th>
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<td>Eo (No. (%))</td>
<td>Co (No. (%))</td>
<td>Mo (No. (%))</td>
<td>My (No. (%))</td>
<td>Pm (No. (%))</td>
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<td>Ca (No. (%))</td>
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*Remark; Cs; Clonorchis sinensis, Eo; Exorchis oviformis, Co; Cyathocotyle orientalis, Mo; Metorchis orientalis, My; Metagonimus yogogawai, Pm; Pseudexorchis major, Mh; Metacearia hasegawai, Ca; Centrocestus armatus, Ej; Echinochasmus japonicus, Un; Unidentified, Mi; Multiple infection.
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11cm 크기 메기(Parasilurus asotus)의 비늘과 꼬리로부터 横川吸虫의 被囊幼虫을, 7월에는 40미터의 메기 비늘을 摘取하여 35미터로부터 横川吸虫을 検出하 여 개체에 人工感染시켜 被囊虫을 얻었으며, 그 밖에 被囊幼虫은 거의 摘取할 수 없었다고 報告하였다.

世界 第二次大戦 以降経て有田(Takahashi)(1960 a, b)이 盛岡 三川産 귀어(Plecoglossus altivelis)에서 横川吸虫, 金 海地方産 引虫(Carassius carassius)에서 Metagonimus takahashii 및 E. oviformis의 被囊幼虫을 摘取, 報告한 以来, 全国 各處 河川에 摘取하고 있는 横川及 三川吸虫으로부터 14種 以上の 吸虫類 被囊幼虫이 摘出 報告 되었다(有田, 1962; Hwang and Choi, 1980).

그러나 横川 江域 水系에 摘取하는 横川吸虫의 吸虫類 旧囊幼虫에 대한 調査는 肝吸虫의 旧囊虫에 염는 것 같다. 즉, 假性寄生虫(Burkinius)는 横川으로부터 約 4km 동안의 江域에 주로 4km 동안의 江域에 주로 20 species 이상에 頻見される 17種 1,106마리의 江域魚 종 16 種 403마리(36.4%)로부터, 财政(1978)은 1974年에 横 順江 江域 水系의 吸虫 11種 346마리 중 6種 98(28.3%) 유사으로부터 肝吸虫, 被囊幼虫을 各々 摘出하였다고 報告한 바 있다.

이와 같이, 横川 江域 水系에 摘取하는 吸虫類의 各種 被囊幼虫調査는 肝吸虫을 除外하고는 頻見された 마 십으로 著者 등은 32種 380마리의 江域魚를 探集하여 吸虫類의 各種 被囊幼虫의 寄生状 況を 調査하게 되었다.

32種의 江域魚 중 30종을 除外하고 모두 2種 以上 背面寄生虫에서는 ウリ 10種 以上の 被囊幼虫이 摘出
이와 같은 결과를 활용한 것 같으면, 일반적으로 본
조사 서류로서 사용한 낙타 중에서 물고기의 객관
적으로 식물성 식물의 산화류 벌구류의 장조를
의 중첩된 사람이 가장 적합하고자 생각할 수 있다.
그리고, 이는 앞서(1970)에서 기록한 바와 같이
치의 구조에 있어서 고유한 (1951)의 조사 결과
와 비교하면 전체의 전체가 이미 확정된 끝에 따라
다수의 양과는 달리 식물성 식물의 산화류의
격은 80~1,740(862) 및 112~3,463(1,572)로 산화
이었다. 이는 1970년 조사의 결과보다 유리하게
남았다.

결론으로, 왕복江 液流 水系에 植物性의 32개
의 낙타 중에서 물고기의 객관성 벌구류의 장조를
의 중첩된 사람이 가장 적합하고자 생각할 수 있다.
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남았다.

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江液流(全北水利區內)의 質地検査, 第2中間初生
査. 農村衛生, 1(1):31-33.
Survey on Encysted Cercariae of Trematodes from Fresh-water Fishes in Mangyeong Riverside Area

Jae Ku Rhee, Ho Il Lee, Byeong Kirl Baek and Pyung Gil Kim
Department of Veterinary Medicine, Jeonbug National University

In order to clarify infestation pattern for the encysted larvae of digenetic trematodes from freshwater fishes, this survey was carried out from March to September, 1983. A total of 380 fishes of 32 species were collected with netting at the three reaches, upper, middle and lower in Mangyeong riverside area.

After the fishes were dissected into small scraps, they were pressed under cover glass and examined for the presence of those of digenetic trematodes with a microscope. The results obtained were as follows;

Out of a total of 380 fishes inspected, 320 fishes (84%) from 31 species were found positive with digenetic trematode metacercariae; more than 10 species of the metacercariae were detected in Pseudorasbora parva; Gnathopogon majimae, Microphysogobio yaluensis, Cultriculus eigenmanni and Gnathopogon coreanus (more than 8 species); Aphyocypris chinensis (8 species) and etc. respectively.

Clonorchis sinensis metacercariae were found positive from 93 fishes (25%) from 12 species and detection rates in other species of digenetic trematode metacercariae from various fishes were; Echinochasmus japonicus, 2 fishes (5.5%) from 1 species; Clycotyle orientalis, 8 fishes (9.2%) from 2 species; Metorchis orientalis, 21 fishes (7%) from 2 species; Metagonimus yokogawai, 164 fishes (43%) from 26 species; Pseudotherorchis major, 71 fishes (19%) from 18 species; Metacercaria hasegawai, 77 fishes (20%) from 25 species; Centrocestus armatus, 24 fishes (6%) from 7 species; Echinochasmus japonicus, 2 fishes (0.5%) from 2 species, and unidentified species, 34 fishes (9%) from 15 species respectively.

The sums of average number of the encysted larvae of all species found in fish body/gram showed 83 in P. parva, Cobitis taenia (7.4), A. chinensis (28.5), Pseudoperilampus uyekii (26.6), G. majimae (19.6) and etc. respectively and the average peak number of each metacercaria in fish body/gram showed 21.7 C. sinensis, 24 E. oviformis, 15.3 M. orientalis and 6.1 E. japonicus in P. parva; 42.7 C. orientalis and 25.1 M. yokogawai in C. taenia; 8.3 C. armatus and 8.3 M. hasegawai in P. uyekii; 6.3 P. major in Carassius carassius, and 2.9 unidentified species in G. majimae respectively.