PARATONSILLAR MYIASIS

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Myiasis is a disease caused by maggot infestation and may appear in many forms. The invasion by the maggots may be either in the form of primary or secondary invaders and the extent of the damage done would depend upon the nature of the attack. The most common form of myiasis is the cutaneous or dermal myiasis which may be the result of a traumatic injury. There are, however, many forms of myiasis which attack the body cavities and which will include vaginal, gastric, intestinal, aural, nasal, or nasal pharyngal. In rare instances one comes across a case of paratonsillar myiasis, which is the topic of this article.

In looking over the literature on the field, one is astonished by the number of cases reported, by the different types of myiasis discovered and by the many different causative agents encountered. After combing as carefully as possible the literature in this field, the author of this article was able to discover only two reported cases of paratonsillar myiasis. It is perhaps this rarity that justified the reporting a case of what would otherwise be just another case study on myiasis.

The writer of this article was connected with this case in the role of a biologist whose aid was solicited in the identification of a maggot which had been discovered in the abscessed region of the paratonsillar area by Dr. Robert Magill of Springfield, Illinois. Dr. Magill later called in Dr. Pearson, also of Springfield, as consultant in this most unusual case. The case history is as follows: The patient was a male farmer, aged sixty-three, weighing about one hundred and fifty pounds. He had a history of good health, and in all respects was physically sound, with the exception of dental cavities, which later on necessitated the removal of fifteen teeth.

The patient was first seen when he was treated at the office for what was apparently a slight sore throat, accompanied by pain in the left side of the face, and extending up to and around the ear. After the patient had returned to his home, the symptoms were intensified. Late that night the physician was called to his home and opiates were given to alleviate the intense suffering. The following morning the patient was removed to the hospital, and his throat was lanced in the paratonsillar region. Instead of the pussy exudate which the physician expected, a maggot crawled out of the swollen area. Further exploration was made, but no more maggots were discovered at that time. Since this malady was so unusual, the physician in charge called in several other medical men to observe the case, and the maggot was sent to the biology laboratory for identification.

Before any definite conclusion as to the identity of the maggot could be made, more maggots were discovered by the physician. The physician had followed the suggestion of the author of this article, which was based upon the treatment recommended by Chandler for the removal of nasal maggots. This treatment was simply the milk chloroform douche, and resulted in the removal of maggots in groups of three, three, four, seven, until about twenty were removed. With their removal the pain decreased, the mental apprehensiveness of the patient naturally subsided, and complete recovery was rapid. The patient was finally discharged from the hospital six days after entering it. He is now in good health, pain has not returned, and no more maggots were ever discovered.

The only clue to the localization of this infestation lies in the fact that the patient was a mouth breather, and not infrequently slept in the vicinity of the barn at the noon hour. It is believed that the odor which was the result of his poor teeth attracted the flies and made it possible for the implantation of the eggs. As Chandler says: "Possibly halitosis, however so much exploited in recent years, is as much an attraction to the fly as it is a repellant to romance."

Identification of these maggots was made difficult by the treatment given in their removal, as they were barely alive by the time they arrived at the biology laboratory. After hand lens examination, and after reading over the literature on the field, it was finally decided that this

particular maggot was either the *Cochliomyia americana* or the *Cochliomyia macellaria*. Cushing and Patton in 1935 differentiated between these two and defined the *Cochliomyia macellaria* as saprozoic, and the *Cochliomyia americana* as parasitic. At this time Dr. Chandler of the Rice Institute was contacted, and after the description was given to him he had the following observation to make: "I think it very likely that your maggots belong to the species *Cochliomyia americana*, since a very high percentage of primary myiasis of skin or mucous membranes is caused by this species. *Cochliomyia macellaria* and various species of *Lucillia*, *Phormia*, etc., are nearly always secondary invaders. The distinction between *Cochliomyia americana* and *Cochliomyia macellaria* lies mainly in the large spiracles and particularly in the heavily chitinized main tracheae tubes of americana as compared with those of macellaria." It is because of this differentiation that the final identification of the *Cochliomyia americana* was felt to be justified.

Chandler has the following description concerning these flies: "The adult fly is a handsome insect, nearly twice as large as a house fly, of a dark metallic, blue green color with whitish dusting, three stripes on the thorax, and a rather conspicuous orange coloring on the face. It belongs to the *Calliphorine* division of the *Muscidae*, which includes the common blow-flies or blue bottle flies, as well as *Aucheromyia*.

"The larvae are whitish with bands of minute spines which give them a screw-like appearance; they can be distinguished from the larvae of *Cochliamyia macellaria* by the much larger spiracles and large heavily chitinized main tracheal tubes, as well as by other less conspicuous characteristics. Eating away at flesh and even bone, they grow to a length of 12 to 15 millimeters when mature; they then spontaneously leave the animals in which they have developed, bury themselves in loose earth or sand, and pupate. *Cochliomyia macellaria* may complete its whole life cycle in nine or ten days, but *Cochliomyia americana* is slower; according to investigations of the U. S. Bureau of Entomology, the whole life cycle requires from eighteen to twenty-two days in summer weather.

The damage done by maggots may be very extensive, and is not infrequently fatal. Reports of 179 cases treated in public hospitals in certain British Colonies over a period of five years, compiled by Aubertin and Buxton, show that 15, or 8 per cent, died. There is usually an abundant discharge of pus, blood, and scraps of tissue, accompanied by intense pain, and often delirium. Not all the injury is due to the activities of the larvae; part is due to toxic products of secondary bacterial invasion. Often nervous disturbances such as convulsions, visual disturbances, and loss of speech are complained of."

The relative infrequency of this type of disease is no doubt due to the improved sanitary condition of the country. One wonders how many undiagnosed cases terminated fatally in the days when sanitation, such as we have it now, was not so common. This relative infrequency can also be accounted for by the fact that in a meat bait trap, less than five tenths per cent of the flies caught showed presence of the *Cochliomyia americana*. It is such infrequency, however, that causes the *Cochliomyia americana* to be of interest to the Parasitologist.

Bibliography on Myiasis

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