

Extra-Pulmonary Tuberculosis (A Review and Report)

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Abstract

Introduction: Tuberculosis is one of the oldest known diseases in humans; this disease is known to have high mortality rates, so that this rate might rise up to 50% in case of non-treatment. Mycobacterium has more than 100 species, some of which are pathogenic in humans and some others in animals.

Methods: In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Extra-pulmonary tuberculosis. In this review, the papers published until early January 2017 that were conducted to study the Extra-pulmonary tuberculosis were selected.

Presenting the patient: The patient was a 15-year-old boy who was referred to the Infectious Diseases Department of Amir al-Moamenin Hospital in 2016 due to abdominal distension, abdominal pain and fever. Based on what the patient said, the onset of the disease can be traced back to two weeks before his visiting the hospital, when he was afflicted with weight loss and anorexia along with a fever.

Conclusion: Considering increasing annual incidence of tuberculosis in the Middle East, especially in developing countries, and high risk of Iran's neighboring countries, including Pakistan and Afghanistan, regrading health issues, and the economic and psychological damage caused by the disease, identifying the factors that contribute to the incidence of TB can help manage and control this disease better and, ultimately, reduce the economic and psychological damage caused by the disease.

Keywords: Extra-pulmonary, tuberculosis

INTRODUCTION

Tuberculosis is one of the oldest known diseases in humans; this disease is known to have high mortality rates, so that this rate might rise up to 50% in case of non-treatment (1). Mycobacterium has more than 100 species, some of which are pathogenic in humans and some others in animals. The most famous species of Mycobacterium tuberculosis is the cause of deadly TB in humans (2). In 1993, the World Health Organization described the disease as an emerging global health emergency. According to the World Health Organization, lack of effective control of the disease in the world would increase the number of patients up to about one billion, 35 million of whom would die, between 2000 and 2020 (3). According to the current trend, the mortality rate of this disease will increase from 1.87 million in 1997 to 30 million in 2020 (4). More than 90% of cases of tuberculosis belong to developing countries. The disease has been recognized as a common and native disease in the countries of the Eastern Mediterranean region (5). The risk of the incidence of this disease is high in Iran due to geographical situation of the country and its being neighbor with some of the most polluted areas in the world, including Pakistan and Afghanistan (6). Bases on reported issued by Iranian authorities, the infection and incidence rates of tuberculosis are 19.7% and 37% out of one hundred thousand, in order, which put Iran in the seventeenth place in the world (7). According to the Center for Disease Control of the Ministry of Health and Medical Education, the incidence rate varies between 12 to 73.5% in different parts of the country (8).

METHODS

In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Extra-pulmonary tuberculosis. In this review, the papers published until early January 2017 that were conducted to study the Extra-pulmonary tuberculosis were selected.

PATIENT

The patient was a 15-year-old boy who was referred to the Infectious Diseases Department of Amir al-Moamenin Hospital in 2016 due to abdominal distension, abdominal pain and fever. Based on what the patient said, the onset of the disease can be traced back to two weeks before his visiting the hospital, when he was afflicted with weight loss and anorexia along with a fever. Early leukocytosis was observed. In abdominal ultrasonography, mild enlargement of the spleen and ascites were reported; complete blood count of macrocytic anemia, liver tests, and prothrombin time of 15 seconds turned out to be normal. The patient received a peritoneal biopsy, the response to which was chronic granulomatous disease. Then, the patient started anti-TB treatment with 4 drugs, along with prednisolone, which improved fever and general status of the patient.

DISCUSSION AND CONCLUSION

Despite many measures and strategies, provided by the health network of different countries, to reduce and limit the spread of TB in the community, the prevalence of this disease is high (9). Since many environmental factors and underlying diseases can increase the risk of infection of

tuberculosis, detecting the most powerful factors in each context will help limit the incidence of the disease (10). The transmission of tuberculosis to the peritoneal cavity may be caused by sputum swallowing, directly from an adjacent lymph node or as hematogenous and only the dissemination of lymphoma involves deficiency in the defense system of the host. Initial diagnosis in case of the present under-study patient included hepatitis, resistance to typhoid brucellosis, osteoporosis, collagen and vesicular disease, lymphoma, and familial Mediterranean fever (11). Therefore, each of these potential disorders had to be considered precisely and necessary measured were required to be taken. Peritonitis should be considered in 85% of cases, and the possibility of fibrin mass should be considered in the remaining 15% of cases (12). Considering increasing annual incidence of tuberculosis in the Middle East, especially in developing countries, and high risk of Iran's neighboring countries, including Pakistan and Afghanistan, regrading health issues, and the economic and psychological damage caused by the disease, identifying the factors that contribute to the incidence of TB can help manage and control this disease better and, ultimately, reduce the economic and psychological damage caused by the disease (13).

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