Приказ случаја / Case report doi: 10.5937/opmed1601047B

Општа медицина 2016;22(1-2):47-50 UDC:616.37.002-02

Dimitrichka Bliznakova[1], Margarita Gospodinova[2], Iliyan Todorov[2]

[1] Department of Pediatrics and Medical Genetics, Medical University, Varna, Bulgaria

[2] Department of Infectious Diseases, Epidemiology and Tropical Medicine, Medical University Varna, Bulgaria

A Case of Mumps Orchitis and Pancreatitis in 25 Years Old Man Hospitalized in Clinic of Infectious Diseases – Varna

Key words:

mumps, orchitis, pancreatitis, multi-organ involvement

Abstract

Introduction: Mumps is an acute infectious disease caused by mumps virus. The main pathologic feature is serofibrinous inflammation of the salivary glands, resulting in their swelling. In pre-puberty children the course of illness is usualy benign, and approximately one third of the cases remain subclinical. Extrasalivary gland involvement, such as orchitis, meningitis, pancreatitis is possible. The inflammation of pancreas takes an auspicious course and lasting sequels, such as diabetes mellitus or pancreatic cancer, do not occur. Orchitis occurs in 15-40% of postpubertal males with mumps, and without treatment 30-50% of them develop testicular atrophy, which is associated with male infertility. The testicular atrophy after recovery from mumps orchitis is linked as a predisposing factor for testicular cancer.

Objective: To present a case report of patient with multi-organ localization of mumps virus and to analyze the severity of the specific organ form of the disease.

Case report: We present a case report of mumps, in combination with mumps orchitis and mumps pancreatitis in 25 years old man, hospitalized in the Clinic of infectious diseases – Varna. Diagnosis was established on the basis of clinical features of disease, epidemiological, biochemical and serological data, realized through the relevant laboratories in the St. Marina Hospital – Varna.

Results: In the presented case, the disease started as a moderate form of mumps affecting both parotid glands, and 3 days after the onset of the symptoms, pancreatitis and orchitis occurred.

Conclusion: multi-organ involvement in the clinical course of mumps, taking its with is usual manifestation of the disease. In spite of the multiple organ involvement in this case, the patient recovered without lasting sequels.

Introduction

Mumps or epidemic parotitis is an acute, vaccine-preventable, self-limiting, air–borne viral contagious disease, characterized by aseptic inflammation and swelling of one or more salivary glands, primarily affecting parotid glands[1,3,4,5,7,8]. People are the only known carriers of the causative agent. The infection is a result of inhalation by the susceptible person of the contaminated respiratory droplets, produced by the source of infection during the physiologic and pathologic processes, such as talking, laughing, sneezing, coughing or crying[1,2,3,7]. Direct transmission of the virus is possible, according to contemporary data[8,10]. The disease classically occurs among children aged between 5-15 years, but nowadays, as a result of the effective vaccination, mumps predominantly affects young adults, because of exhausted post vaccinal immunity. About 20-30% of the infected patients develop typical clinical symptoms of the disease, and the severity of disease is dependent on patient's age[12]. In most of the cases soft swelling of the parotid glands develops, which takes benign course and

Correspondence to:
Dimitrichka Bliznakova
Department of Pediatrics and Medical Genetics,
Medical University, Varna, Bulgaria

the complete recovery appears after 8-10 days. Involvement of other organs, such as orchitis, meningitis, or pancreatitis is possible[1,3,4,8]. Mumps pancreatitis is characterized by auspicious prognosis, without occurrence of long-lasting sequels, such as diabetes mellitus[1,2,3,4,8]. Orchitis is presented in 15-40% of males infected in the puberty[1,2,3,4,5,6,7] and some 30-50% of the affected and untreated people, develop testicular atrophy, leading to male infertility[9,10]. Testicular atrophy after recovery from mumps orchitis is linked as a predisposing factor for testicular cancer[7,9]. In the course of clinical investigations which included 5500 persons diagnosed with testicular tumor, history of mumps orchitis was positive in 24 of them, and the mean period between orchitis and appearance of the tumor was about 12 years[7,11].

Objective

We present the case report of patient with multi-organ localization of mumps virus and analyze the severity of the multiple organ involvement form of epidemic parotitis.

Case report

We introduce a case report of previously healthy man, hospitalized in Clinic of Infectious Diseases – Varna, diagnosed as mumps, in combination with mumps orchitis and mumps pancreatitis. Diagnosis was made on the base of typical clinical symptoms, epidemiological, biochemical and serological data, realized in the relevant laboratories in the St. Marina Hospital – Varna. A chronologic reconstruction of the case is introduced below:

A previously healthy, 25 years old man (A.B.T.) was hospitalized in the Clinic of Infectious Diseases, Varna on the date of 28.04.2013. He complained of fever about 38°C, consecutively, painless swelling of the both parotid glands and dull abdominal pain. Symptoms appeared on 25.04.2013. A day before the hospitalization, headache, nausea, weakness and feeling of "stretching" and discomfort in the right testis occurred. Epidemiological data about contact with mumps diagnosed patients during the last 20 days were positive. In the conversation with the patient, he was sure that his immunization status was normal, without missing any of the recommended vaccines, including measles-mumps-rubella.

On the first contact with the patient he was conscious and adequate, intoxicated and febrile to 39,2°C. A swelling of the both parotid glands was present, with soft – elastic consistence and moderate painfulness. Lymph nodes enlargement was not developed. The throat was mildly hyperemic, without coatings on the tonsils, and the tongue was dry and furred. Examination of the oral cavity, revealed ulcerated and red ducts of parotid glands. Auscultation of the lungs did not reveal any abnormalities. On examination of abdomen spontaneous epigastric pain increasing on palpation, physiologic peristalsis, and normal size of liver and lien were found.

The right testis was swelled without redness of the scrotum. The central nervous system examination was normal.

The changes in the laboratory analyzes were consistent to acute inflammatory process (see table 1). Amylase in the sera was mildly elevated, while amylase in the urine was about 12 times the upper limit of normal.

Table 1. Laboratory changes in the presented patient

Laboratory investigations	Value
Hemoglobin, g/l	155
Hematocrit, l/l	0.46
Erythrocytes, x 10^{12}/l	5.37
Leucocytes, x 10^{9}/l	10.7
Neutrophils, %	76.1
Eosinophils, %	0.8
Monocytes, %	6.9
Lymphocytes, %	14
Basophils, %	0.6
Platelets, x 10^{9}/l	210
Amylase in the sera, ME	979
Amylase in the urine, ME	9284

The diagnosis was confirmed by the serologic investigation №2306 (29.04.2013.) which introduced high level of the specific class M anti mumps virus immunoglobulins.

During the inpatient period (9 days) treatment by rehydration, methylprednisolone, vitamin C, antipyretics, analgesics and bed rest were implemented.

Results

During the first days of the hospitalization of our patient, the most common complaints were weakness, intoxication, fever, nausea, epigastric and testicular pain. At the fourth day after initiation of the treatment, body temperature was normal, the swelling of the parotid glands gradually fade down, abdominal pain, dyspeptic complaints and changes in the right testis disappeared. The control analyzes of the serum and urine amylase enzymes were in the normal range, 707 ME and 151 ME respectively. On the basis of anamnesis, epidemiologic data, biochemical and serologic examinations, we accepted the diagnosis of epidemic parotitis (mumps) accompanied by multi organ involvement (pancreatitis and orchitis). The patient was discharged from the hospital in good condition with recommendation for consultation with

urologist after three months – for full sperm examination and checking of the fertile function.

Conclusion

Mumps with multi organ involvement is common clinical sign of the disease. There is no typical order in the inflammatory involvement of the glandular structures in the organism – pancreatitis and orchitis may occur as early symptoms of the disease. In spite of the multi organ involvement in the presented patient, the outcome of the disease was auspicious, with usual duration of the symptoms and without permanent consequences.

Димитрицхка Близнакова[1], Маргарита Господинова[2], Илиуан Тодоров[2]

[1]Одељење за педијатрију и медицинску генетику Медицинског факултета Варна
[2]Одељење за инфективне болести, епидемиологију и тропску медицину Медицинског факултета Варна, Бугарска

Случај мумпс орхитиса и панкреатитиса код мушкарца старог 25 година, хоспитализованог на Клиници за инфективне болести у Варни

Кључне речи:
мумпс, орхитис, панкреатитис, мултиорганска болест

Сажетак

Увод. Мумпс је акутна инфективна болест коју изазива мумпс вирус. Главни патолошки супстрат је серофибринозно запаљење пљувачних жлезда, које узрокује њихово увећање. Ток болести је код деце пре пубертета обично бениган и приближно трећина случајева има супклинички облик. Могућно је да болест захвати и друге органе осим пљувачних жлезда и манифестује се као орхитис, менингитис или панкреатитис. Запаљење панкреаса има повољан ток и не оставља трајне последице, као што су дијабетес мелитус или канцер панкреаса. Код 15%-40% мушкараца који оболе после пубертета јавља се орхитис, који без лечења у 30%-50% случајева доводи до атрофије тестиса која је повезана с мушким инфертилитетом. Атрофија тестиса после прележаног мумпс-орхитиса представља предиспонирајући фактор за тестикуларни канцер

Циљ рада. Приказ случаја пацијента са мултиорганском локализацијом мумпс вируса и анализа тежине случајева у којима су болешћу захваћени специфични органи.

Приказ случаја. Приказ случаја мумпса комбинованог са мумпс-орхитисом и мумпс-панкреатитисом код мушкарца старог 25 година, хоспитализованог на Клиници за инфективне болести – Варна. Дијагноза је постављена на основу клиничких карактеристика болести, епидемиолошких података и биохемијских и серолошких анализа, које су рађене у релевантним лабораторијама у "Ст. Марина" болници у Варни.

Резултати. У приказаном случају болест је почела као умерен облик мумпса који је захватио обе паротидне жлезде, а трећег дана од избијања симптома дошло је до панкреатитиса и орхитиса.

Закључак. Захваћеност више органа представља честу манифестацију клиничког тока мумпс вирусне инфекције. Упркос томе што је болешћу било захваћено више органа, у овом случају пацијент се опоравио без трајних последица болести.

References
Литература

1. Господинова М, Ганчева Т, Ненова М. *Особености на епидемичния процес и клиничните прояви на епидемичен паротит в град Варна и региона*. 1997-1998, сп. „Инфектология", 1999;3:9-12.
2. Илиев Б, Митов Г, Радев М. *Инфектология*. София, 2001;167-73.
3. Anonymous. *A retrospective survey of the complications of mumps*. J R Coll Gen Pract 1974;24:552–6.
4. Bannister B, Gillespie St, Jones J. *Infection Microbiology and Management*. Third edition, UK, 2006:11;243-44.
5. Beard CM, Benson RC Jr, Kelalis PP, Elveback LR, Kurland LT. *The incidence and outcome of mumps orchitis in Rochester, Minnesota, 1935–74*. Mayo Clin Proc 1977;52:3–7.
6. Candel S. *Epididymitis in mumps, including orchitis: further clinical studies and comments*. Ann Intern Med 1951;34:20–36.
7. Gilbert JB. *Tumors of testes following mumps orchitis. Case report and review of 24 cases*. J Urol 1944;51:296–300.
8. Jong E, Stevens D, Netter's Inf Dis, 2012, Section 1, Chapter 11, 47-50.
9. Kaufman JJ, Bruce PT. *Testicular atrophy following mumps. A cause of testis tumour*? Br J Urol 1963;35:67–9.
10. Local Health Department Guidelines for the Epidemiological Investigation and Control of Mumps, Maryland Department of Health and Mental Hygiene, Infectious Disease and Environmental Health Administration, Center for Immunization, July 2012.
11. Senanayake SN. *Mumps: a resurgent disease with protean manifestations*. Med J Aust 2008;189:456–9.
12. Shanley JD. *The resurgence of mumps in young adults and adolescents*. *Cleve Clin J Med*. Jan 2007;74(1):42-4, 47-8.

Primljen • Received: 18/03/2015
Ispravljen • Corrected 17/11/2015
Prihvaćen • Accepted: 20/11/2016