Diphtheria in an Adult: How Well Prepared Are We in Tackling the Disease? A Case Report

Syed Aqeel Raza · Umesh Nagalotimath ·
Kavitha Achar

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Abstract Diphtheria is a forgotten communicable disease and presumed to be under sufficient control so much so that life savings drugs required for its treatment has disappeared from most hospitals. Contrary to this belief, classical diphtheria continues to exist in many parts of India despite extensive immunizations campaigns raising the suspicion of resurgence. The absence of essential drugs in treatment of this condition has further worsened the situation. The expenditure involved in procuring these drugs is yet another constraint. We here by present one such case of adult diphtheria and discuss the problems associated with its diagnosis and treatment.

Keywords Diphtheria · Antidiphtheritic serum

Introduction

Diphtheria, one of the major causes of morbidity and mortality in the past, is now an almost forgotten communicable disease. It is still a major public health problem in developing countries like India. In spite of world health organization and the country's best efforts in implementing the expanded programme of immunization; the disease continues to rear its ugly head in many pockets of India in children and more surprisingly in adults.

This case of diphtheria in an adult shows all the difficulties faced in dealing with the disease, especially in the

peripheral areas, and also in tertiary hospitals. The difficulty in procuring life saving drugs like antidiphtheritic serum (ADS) even in a tertiary hospital at district level compounds the problem.

Case Report

A 20-year-old adult male from Bagalkot presented to us with chief complaints of fever and sore throat since 5 days.

Fever was of high degree with chills and rigors, gradually progressive and patient took treatment for the same from local doctor. He noticed patch over the tonsil 2 days later, which was treated by the same doctor as streptococcal tonsillitis. Incision and drainage was attempted (Fig. 1). As the symptoms were not subsiding, he was referred to our hospital.

On examination, the patient was febrile. In the oropharynx, the anterior pillars were congested bilaterally; tonsils were hypertrophied, congested greyish white patch present over tonsils and soft palate. Soft palate movements were normal. Posterior pharyngeal was congested, traumatic wound was present over the right side of tonsil. Indirect laryngoscopic examination was within normal limits.

In the neck, bilateral tender jugular lymphadenopathy present. Nose and ear examination normal. On investigation throat swab was positive for Albert's stain. Electrocardiography was normal, echocardiography was normal (Figs. 2 and 3).

He was immediately treated with intravenous fluids, Injection antidiphtheritic serum given 60,000 IU, intravenously in normal saline dilution after giving test dose. Injection antidiphtheritic was not available in our tertiary care, so it had to be procured from a private pharmacy.

S. A. Raza (✉) · U. Nagalotimath · K. Achar
Department of ENT, Karnataka Institute of Medical Sciences,
Hubli, Karnataka, India
e-mail: kavithaent@yahoo.co.in

Fig. 1 Showing incision and drainage attempted at primary health centre

Fig. 2 ECG within normal limits

Injection-amoxicillin and clavulanic acid was given intravenously 1.5 gm twice daily for 3 days. Injection-metronidazole 100 ml three times daily for 3 days. Patches soon disappeared, general condition improved. On discharge tablets amoxycloxacilanic 625 mg twice daily and tablet metronidazole 400 mg thrice daily was given for 14 days. Booster diphtheria tetanus immunization was advised for him. Chemo prophylaxis tablet erythromycin 500 mg thrice daily for 14 days for the family members was advised.

Fig. 3 ECG long lead—normal

Discussion

Diphtheria is a forgotten disease. So much so, that life saving drug like antidiphtheritic serum are not available in tertiary hospitals. Delay in treatment leads to high morbidity and mortality [3, 4]. During the time of an epidemic, we are helpless because of non availability of ADS. If available, the expenditure involved in procuring ADS is another constraint.

The main factors leading to the epidemic include low immunization coverage among infants and children, waning immunity to diphtheria among adults [1, 2]. The possibility of new virulence factors in the epidemic strain should be considered.

Conclusion

This case highlights the fact that we as ENT surgeons should always be on high alert when an adult presents with patch over tonsil. The disease persists in adults and children despite nearly 20 years of universal immunization programme in our country. Cases in adults are often misdiagnosed. After diagnosing, treating this is becoming difficult because of non availability of antidiphtheritic serum.

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