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Continuous Medical Education Forum (CME from EB)

Continuous medical education activities; Case No. 1

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A three years old male was presented, fatigued with history of fever for 4 days. He became acutely ill and vomited during lunch. Over the next 4 days he developed fever as high as 40°C that was controlled by Acetaminophen. He developed cough, rhinorrhea, and conjunctivitis. His parents reported that he was very sleepy. Over the past 2 days, he had begun to rub his eyes and complained a severe pain in it His parents noted that his eyes were puffy and sensitive to light. He had had no rashes. The patient's lips were dried and cracked and he has a greatly reduced urinary output. (To be continued...).

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They told that since the first of October he used to attend preschool twice per week. He had multiple sick colleagues in mid-January (his illness started in late January). His 1-year sibling had otitis media, some wheezing, vomiting and

a productive cough.

On physical examination he had a temperature of 38.6°C, pulse rate of 126 beats/ min, respiratory rate of 28/min with an oxygen saturation of 100% on room air. Significant findings included bilateral conjunctivitis with exudate in the left eye, bleeding, cracked lips, and rhinorrhea. He had shotty lymphadenopathy but no rash. His feet were slightly edematous. His respiratory examination was normal. Laboratory findings were all normal. A nasopharyngeal swab was sent for rapid antigen testing for respiratory syncytial virus (negative) and influenza A virus. The results of those tests are shown in figure 1.

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Figure 1.

Q1- Why did the pediatrician order a nasopharyngeal not a throat swab? What is the main difference between both types?

Q2- What is the causative agent of this case? What are the symptoms consistent with his illness? What are the key virulence factors of this agent?

Q3- What is the usual outcome of this infection in children? In which patient population do you expect bad prognosis?

Q4- Physical examination showed bilateral conjunctivitis, why was the pediatrician concerned to reveal a history of rash?

Q5- What are the most appropriate antipyretics for this case? Justify your answer

Q6- In your opinion, how did this child get affected?

Q7- What is the vaccine used to prevent this infection? -- Discuss its current role in industrialized world. What is the vaccination schedule for children? Clarify the reasons of such policy.

Q8- What are therapeutic drugs used in this case?