

Fatal Systemic Candida Infection*

(A Case Report)

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The normal inhabitus of the *Candida* species are oral cavity, intestinal tract, and vagina, from where it may be cultured in 35 to 40 % of normal persons.¹ But this organism can produce serious diseases such as sepsis with disseminated involvement of multiple organs or tissue invasion (lungs, kidneys, or brain) in certain conditions such as the use of immunosuppressive treatment with anti-metabolic and cytotoxic agents in transplantation,² or leukemia,³ prolonged antibiotic therapy or administration of corticosteroids, compromised hosts,^{2, 4, 5} hepatic cirrhosis, SLE, burns, etc.

The widespread use of indwelling catheters in the umbilical vessels,^{6, 7} and prolonged central venous catheterization for parenteral alimentation⁸⁻¹² are important factors associated with recent increase in systemic Candidiasis.

In this paper we would like to present a case who had generalized fatal *Candida* infection following measles, this has not been reported previously to the best of our knowledge.

Case Report

C. N., a 5 year old girl, was referred to the Hacettepe Children's Hospital with diagnosis of measles which was made by the referring physician upon the presence of the Koplik's spots on the 7th day of her initial symptoms.

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Physical Findings Revealed: Temperature 39 C, pulse rate 132/min, respiration 68/min, blood pressure 100/60 mmHg. The patient was unconscious at the time of admission, peri-oral cyanosis, subrastral and subcostal retractions, dyspnea were noted. Bilateral crepitant rales were present in both lung fields. The liver was palpable 2 cm below the right costal margin.

Laboratory Examination: Hb 14.89 g/dl, Hct 48 %, urine analysis was normal, blood chemistry determinations for Na⁺, K⁺, Cl⁻, and BUN were within normal limits, PPD test was negative, throat culture yielded heavy growth of *Candida albicans*, chest X-ray revealed pop-corn appearance in both lung fields, and ECG showed sinus tachycardia. (Figure 1).

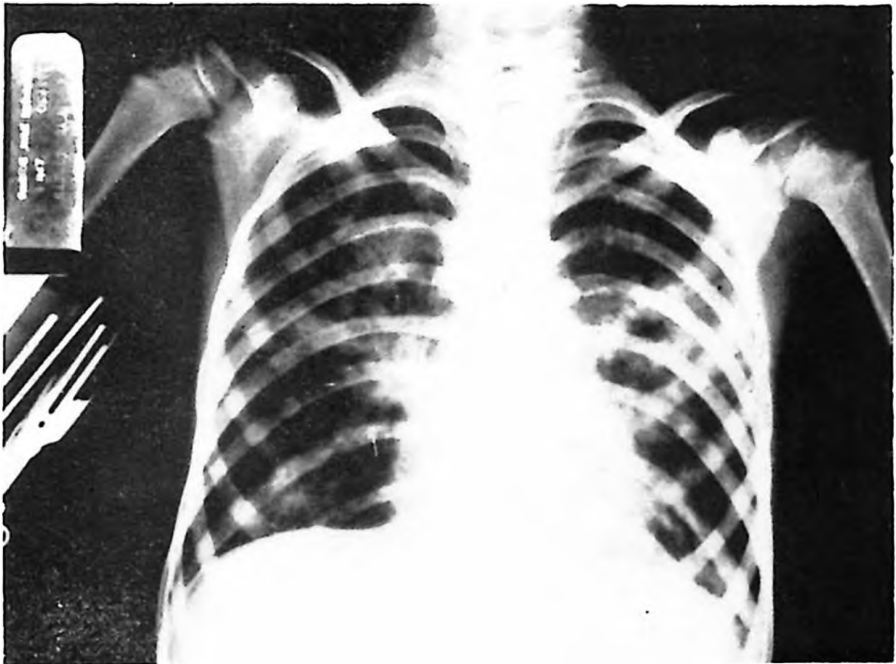


Figure 1

In spite of direct oxygen inhalation and administration of Crystallin Penicillin 2.000.000/kg I. V., Chloramphenicol 50 mg/kg I.V., and Prednisolon 100 mg/day I. V. Fever and bronchopneumonia persisted. On the second day after the admission, a central venous pressure catheter (C. V. P.) was inserted because of hypotension and increased cyanosis. The patient did not respond to the therapy and died on the 7th day after admission.

The necrobiopsy obtained from the lung showed pseudohyphae, and blastospores infiltration in the veins and in the tissue. (Figures 2, 3).

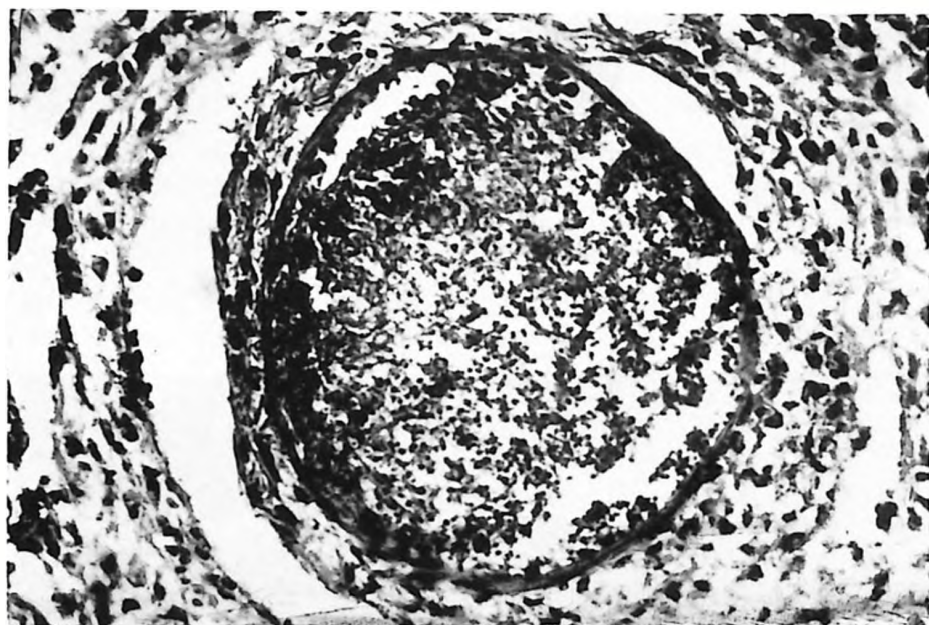


Figure 2

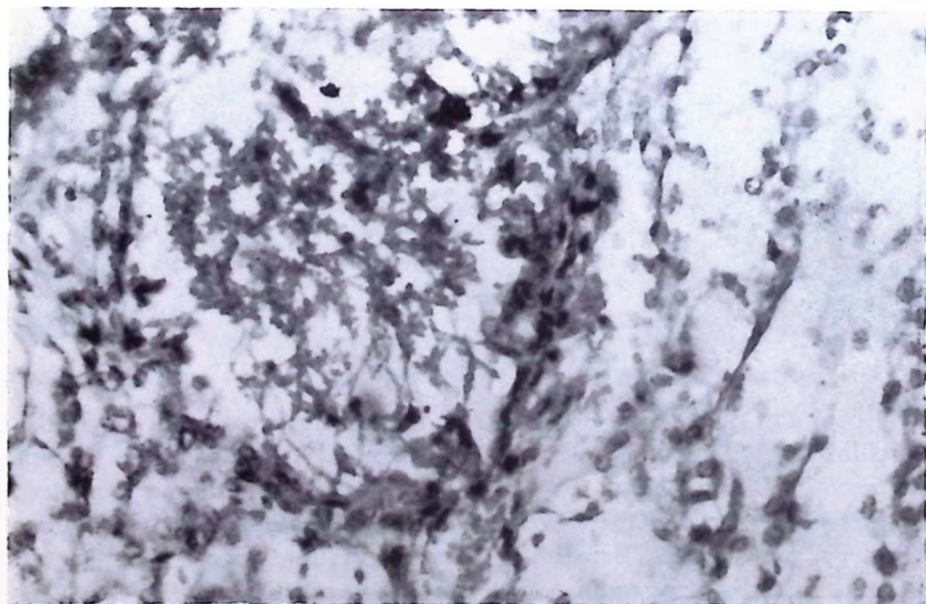


Figure 3

Discussion

Systemic Candidiasis is a major problem in patients with altered resistance to infection due to both the basic disease and the use of corticosteroids and antibiotics.³ In this case, the predisposing factors that may have been important, are the use of indwelling catheter, intravenous fluid, and corticosteroid treatment.

The major problem in the management of systemic Candidiasis is the lack of a clear-cut diagnostic criteria on which the therapy depends. Although blood cultures are useful, culture of *Candida* from a single blood specimen may represent skin contamination or transient fungemia. A useful *Candida* precipitin test^{13, 14} in the diagnosis of Systemic Candidiasis could not be performed in our case.

It is well known that bronchopneumonia may develop in measles due to secondary bacterial invasion. Although the depression of cell mediated immunity has been known interstitial pneumonia by *Candida albicans* has not been reported.

The use of corticosteroid and C. V. P. catheters have also been reported as a cause of systemic *Candida* infection. Although the initial throat culture showed abundant growth of *Candida albicans* and the typical X-ray appearance, we believe, however, that the measles was the prime predisposing factor in our case. But corticosteroid, antibacterial treatment, and the C. V. P. catheterization could have had effect on the poor prognosis of this patient.

Summary

A 5 year old girl, post measles, and with systemic *Candida* infection, is presented. The role of the central venous pressure catheterization, and steroid therapy is discussed. Some evidence was presented that in this case of visceral candidiasis, measles infection was the prime predisposing factor.

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