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Budding Yeast Forms on Peripheral Blood Smear: An Intriguing Finding

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54 year old female, case of metastatic carcinoma breast presented to the emergency in semi-comatose state. Investigations revealed normal renal and mildly deranged liver functions. Hemogram done from central line sample showed Hb 9.7 of g%, neutrophilic leukocytosis and adequate platelets. Peripheral blood smear (PBS) showed numerous intracellular (within neutrophils and monocytes) yeast forms (Fig. 1) which were morphologically difficult to differentiate from histoplasma species. The organisms were positive for PAS and Gomori methenamine silver (GMS) stain and negative for mucicarmine & India ink preparation. Fresh blood and tracheal secretion culture revealed yeast within 24 h of incubation. Subculture streaking revealed dry, dull creamy white heaped up colonies of *Candida*. Identification was done on Vitec-2 which revealed *Candida tropicalis*. The patient succumbed to her metastatic disease and bacterial sepsis developing during ICU stay 7 days later.

Candida is commonest cause of blood stream fungal infection but still it is rarely reported in PBS [1]. This is because $1-5 \times 10^5$ CFU/mL organisms are required to detect them on PBS [2]. An awareness of morphology of these organisms is essential for identification and

Fig. 1 Multiple intracellular yeast form of *Candida* sp. in peripheral smear ($\times 400$, Giemsa stain) positive for GMS ($\times 400$, left upper inset) and periodic acid Schiff ($\times 400$, right lower inset)

differentiation from other causes of blood stream fungal infections like *Histoplasma* and *Cryptococcus*.

Compliance with Ethical Standards

Conflict of interest The authors declares that they have no conflict of interest.

Disclaimers The identity of the patient is not disclosed here in this case.

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