



The natural course of a localized BCG vaccine abscess

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Fig. 1. (a) Initial presentation. (b) 1 week after initial presentation. (c) 4 weeks after initial presentation. (d) 10 weeks after initial presentation.

A mother presented her 1-month old term infant with a slowly progressive subcutaneous 1.2 by 1.2 cm swelling on the left upper arm (Fig. 1a). On the same site, 0.1 mL Bacille Calmette-Guérin (BCG) vaccine had been provided intradermally on the day of birth. Manufactured by Queen Saovabha Memorial Institute, Thai Red Cross Society, Bangkok, Thailand (Lot No. FB00817), 1 mL contains about 2 million viable bacteria of the live attenuated *Mycobacterium bovis* Tokyo 172 strain. No systemic symptoms were reported and on examination, no lymphadenitis was present. A wait-and-see treatment approach was adopted, the infant was discharged home, and a local health care worker documented the spontaneous resolution of the lesion and the natural course of healing (Fig. 1b–d).

BCG vaccines have been used for nearly a century, are considered safe and remain recommended by a majority of countries [1]. Approximately 1–10% experience adverse reactions, of which most are localised (i.e. abscess, lymphadenitis); systemic adverse reactions (e.g. osteomyelitis, BCG disease) are rarely observed [2]. Adapting a conservative wait and see approach for localized BCG

injection site reactions as well as non-suppurative lymphadenitis, leads to a self-limiting, spontaneous resolution of symptoms in the majority of cases.

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References

- [1] Colditz GA, Berkey CS, Mosteller F, Brewer TF, Wilson ME, Burdick E, et al. The efficacy of bacillus Calmette-Guérin vaccination of newborns and infants in the prevention of tuberculosis: meta-analyses of the published literature. *Pediatrics* 1995;96(1 Pt 1):29–35.
- [2] Venkataraman A, Yusuff M, Liebeschuetz S, Riddell A, Prendergast AJ. Management and outcome of Bacille Calmette-Guérin vaccine adverse reactions. *Vaccine* 2015;33(41):5470–4.

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