Original Research Paper

Diagnosis of rare complication by teledermatology

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In 1998 two doctors at the Taupo Health Centre, namely Peter Fleischl and myself, were involved in a teledermatology research project in association with Waikato Hospital dermatology department (see box below).

During the year, a 26-year-old patient of mine, EM (initials altered), presented at 29 weeks in her second pregnancy with a rash. This was initially a slightly itchy rash of annular plaques with superficial white pustules at the leading edge, occurring first on the abdomen and upper chest and was symmetrical. A week later the rash had become more florid, it had spread more to the abdomen, it was more painful than itchy and there were small white lesions inside the buccal mucosa. By the following day, the arms and legs were involved proximally, the hands were spared initially, but the rash later spread to the hands.

At that stage, I took digital photographs of the rash and sent them as attachments by electronic mail to Dr Amanda Oakley, who felt the diagnosis could be acute generalised eczanthematous pustular dermatitis (AGEP). However the diagnosis was not certain, even after a conventional consultation at Waikato Hospital.

The rash continued to extend, becoming even more painful. With EM's permission I took a further series of digital photographs to send to Amanda Oakley for circulation to Rx derm, an internet listserv for dermatologists. Within two days there were three replies from dermatologists, two in the US and one in Europe who had seen a similar rash previously. Their diagnosis was impetigo herpetiformis, which was soon confirmed by biopsy.

Serious outcome possible for mother and baby

Impetigo herpetiformis, also referred to more recently as generalised pustular psoriasis of pregnancy, is a rare dermatological complication occurring during pregnancy and may have a serious outcome.

It usually occurs without preceding history of psoriasis, there may be quite severe constitutional disturbance with fever, and maternal death

from cardiac or renal failure may occur. There is also a considerable risk of placental insufficiency leading to stillbirth and neonatal death. The world literature mentions some 200 cases.

EM was thus referred urgently to an obstetrician for further management of the pregnancy.

Initially she was given Betnesol 12mg intramuscularly on two occasions in case there was need to perform early delivery, and was then commenced on prednisone 40mg daily. Oral calcium was also started as tetany was a possible complication. The rash fluctuated over the next five weeks. The only additional treatment however, was flucloxicillin for boils that occurred in the axilla.

The plan was to deliver EM at 38 weeks in Rotorua, our base hospital, but EM went into spontaneous labour at 36 weeks, presenting to Taupo Maternity Home 7cm dilated and too late to get across to Rotorua. She had a spontaneous normal delivery of a live, healthy girl, birth weight 3120g, apgars 9 and 9. There were no abnormal sequelae for the baby.

Following the birth, EM continued on prednisone, which was tailed off slowly over a period of eight weeks. During this time, there were occasional minor fluctuations with the rash, but the rash had finally settled completely by 10 weeks post-pregnancy. Generalised pustular psoriasis in pregnancy can recur in subsequent pregnancies and EM has been advised against further pregnancy. It may also recur with oral contraception, but EM opted to trial oral contraception four months after delivery. The only sign of recurrence was small psoriasis-like lesions on elbows and knees.

Simple technology ensured timely treatment

It was impressive that relatively simple but modern technology using digital imaging and the internet enabled the diagnosis of this rare and potentially serious condition, enabling prompt treatment to produce an excellent outcome for both mother and child. One year prior to this we would not have had this technology available at our surgery and the outcome might not have been as favourable.

There was one slightly amusing side effect. For some years my wife and I had been planning to have a full-scale mid-winter Christmas dinner with friends. After some years, we finally managed to set a date of 4 July. I was dressed in dinner jacket, bow tie and cummerbund and was just sitting down anticipating the first course when the telephone rang, informing me of EM's imminent delivery at Taupo. It was the first time in 24 years that I had done a delivery wearing this formal attire! EM thought this was quite appropriate considering the rarity and importance of this pregnancy. However, the next day I turned up in my usual jeans to do another delivery and had to withstand many ribald

comments from the maternity staff! Well, you can’t win them all!!