

Rebekkah was a friendly, six-year-old girl, who came to the minor illness clinic with her mother. She described how Rebekkah fell off her bike the week before and had many grazed areas, including one on her chin. All the areas had healed well except for the one on her chin, which was still weeping and appeared to be getting larger. She also expressed a concern about a similar patch Rebekkah had since developed on her finger.

All areas of concern were assessed and appeared satisfactory except for the facial one and the one on her finger. On examination, using a magnifying glass, two lesions were observed. The areas were red and inflamed and contained many small, fluid filled vesicles. One small patch on her chin had formed a yellow-crust area but the majority of the lesions were blistered or weeping. Rebekkah said that she felt fine, although her mother reported that she was more lethargic than usual. She was afebrile and appeared clinically well.

Rebekkah was diagnosed as having impetigo, which alarmed her mother, as she had never experienced this before with her other children. To help reassure her it was necessary to explain that impetigo is not usually serious and immediate antibiotic treatment generally provides a quick cure and prevents it spreading to others. Impetigo was described as a bacterial skin infection, mainly caused by *Staphylococcus aureus*, which commonly occurs in children. It was explained that Rebekkah probably developed it after she fell from her bike and the bacteria made its way through the broken skin and caused infection. Prodigy (2006), suggest that the impetigo rash appears approximately 4-10 days after being infected with the bacteria.

As the areas of impetigo were localised, Rebekkah was prescribed topical sodium fusidate ointment, to be applied three to four times a day. Sodium fusidate is a well-known anti-staphylococcal topical antibiotic (Johnson et al, 2006). She was advised to remove the crusts prior to applying the ointment with warm soapy water as this allows it to penetrate the skin more effectively. Hand washing was again emphasized after applying the ointment to prevent spread. This treatment may be required for between 7-10 days. Rebekkah was asked to return for a review in a week so her progress could be assessed. Her mother was unsure about the topical treatment and requested a course of oral antibiotics for Rebekkah as well as the ointment, as she wanted the infection to clear up quickly. It was explained that the topical treatment was as effective as the oral antibiotics if she used it correctly. Rebekkah was advised to avoid scratching or touching the area as it as this would cause it to spread. Her mother was given the prodigy patient information leaflet to take home which would support the verbal advice that was provided. Due to the contagious nature of the infection Rebekkah was advised to stay off school until the lesions had formed crusts or for 48 hours after starting the treatment. They were also advised to avoid touching the patches and that Rebekkah must use her own towels, flannels and bathwater until the infection has gone.

It could be argued whether or not Rebekkah required a course of oral antibiotics to clear the infection as requested by her mother. Koning et al (2003) suggest that there is no standard therapy for impetigo. However, much research indicates that first-line therapy for impetigo favours sodium fusidate to oral antibiotics. The topical treatment is preferred

as evidence suggests that it is as effective as oral, offers improved compliance and a lower risk of systemic side effects, such as gastrointestinal problems (Walling, 2002). It is also well known that staphylococci have become increasingly resistant to oral antibiotics. Studies demonstrate that both mupirocin and sodium fusidate treatments are as effective as oral antibiotics for treating impetigo (Koning et al 2003, Wylie 2002). Yet Johnson et al (2006) suggest that mupirocin should be restricted for MRSA treatment. Prodigy (2006) and The Cochrane Review (Koning et al 2003) also advise the use of topical antibiotic treatment for localised patches of impetigo and possibly even for those with more extensive areas. There was little evidence found relating to the natural course of impetigo. Prodigy (2006), expect the infection to clear without treatment in 2-3 weeks. The Health Protection Agency (Public Health Laboratory Service, 2002) propose that if left untreated, the infected skin may shed for weeks. They also indicate that most transmission occurs in the first week, so treatment needs to be started as soon as possible.

At the follow-up appointment the areas of impetigo had cleared up well. There was no evidence of further spread or infection. Her mother had followed all the instructions well and had checked the other members of her family for transmission. She had also informed the school nurse as suggested. On reflection, this consultation and the outcome were successful. Rebekkah was diagnosed correctly and prescribed the most appropriate treatment, using evidence-based knowledge. It was beneficial having a follow-up appointment to review her situation. Rebekkah's mother also found this beneficial, as she wanted to ensure that the impetigo infection had cleared up and also wanted to ask further questions.

To conclude, impetigo is a highly contagious infection, which can affect anyone but is most common amongst children. If not treated quickly there is a risk of spread throughout the household and school. Prompt diagnosis and action may help prevent this transmission. The preferred treatment for simple impetigo infection is sodium fusidate ointment, which evidence shows, is as effective as systemic antibiotic treatment. In this case study, Rebekkah was diagnosed and treated correctly. This was demonstrated by the infection responding and clearing up as predicted from the sodium fusidate ointment. The same management will be adopted in simple cases of impetigo in the future consultations.

References

- Johnson G, Hill-Smith I and Ellis C (2006) *The minor illness manual* 3rd Edition Oxford, Radcliffe Publishing Ltd.
- Koning S, Verhagen AP, van Suijlekom-Smit LWA et al (2003) Interventions for impetigo (Cochrane Review). The Cochrane Library, Issue 2, 2003. Update Software, Oxford
- Prodigy (2006) Impetigo [Online] <http://www.prodigy.nhs.uk/impetigo> [Accessed 3 September 2006]
- Public Health Laboratory Service (PHLS) Walling, A (2002) Management of Infection: guidance for primary care. [Online] www.hpa.org.uk [Accessed 3 September 2006]
- Walling, A (2002) Topical treatment of impetigo in family practices. [Online] <http://proquest.umi.com/pqdweb?did=116969601&sid=3&Fmt=3&clientId=64887&RQT=309&VName=PQD> [Accessed 3 September 2006]
- Wylie, K (2002) Topical mupirocin seems to be the treatment of choice in systemically well children with impetigo [Online] <http://www.bestbets.org/cgi-bin/bets.pl?record=00055> [Accessed 3 September 2006]