Medication errors: immunisation

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Case histories are based on actual medical negligence claims or medicolegal referrals, however certain facts have been omitted or changed by the author to ensure the anonymity of the parties involved. This article outlines a medication error involving childhood immunisation and examines the underlying causes of the incident. Advice about how to deal with a patient and their family when things go wrong is provided.

Case history

The patient, 18 months of age, was brought to the surgery on a Saturday morning by her mother for a chicken pox vaccination. The patient's mother reported that her daughter had experienced some red swelling around the site of her previous vaccination. The general practitioner went to the vaccine refrigerator and took out the Vaxigrip box of vaccines. The GP then returned to the consultation room and recorded the name Vaxigrip on the computer database. He could not find the name on the list of designated varicella vaccines and so he proceeded to record Vaxigrip in the section reserved for recording vaccines not included on the computer list. The GP then recorded the batch number and administered the vaccine to the patient. Two days later, on Monday morning, the GP received a message from the patient's mother advising him that the patient had had a febrile convulsion at about 9 pm on the Saturday and she had been hospitalised overnight. The patient was now home again. It was at this time that the GP realised his error in giving the influenza vaccine, Vaxigrip, instead of the intended varicella vaccine, Varilix or Varivax. The GP asked the patient's mother to come to the surgery to speak with him.

The general practitioner rang his medical defence organisation (MDO) to obtain advice on how to deal with the situation. It was clear that the GP had made a mistake and given the incorrect vaccine to the child. The GP was advised to discuss the incident in a full and frank manner and it was agreed that he should apologise for the error. The patient's mother and father both attended the surgery later that day. They were both distressed and angry about what had happened to their child. After the meeting, the father remained concerned and he asked the GP to provide him with a written explanation about what had happened. After discussion and review by his MDO, the GP provided the patient's family with the following letter:

'Dear Mr and Mrs Ingram

I sincerely apologise for the great distress I have caused your family. I acknowledge that you must have been very worried and concerned after Emma's febrile convulsion on Saturday. To then find out on Monday that I had inadvertently given Emma the flu vaccine instead of the chicken pox vaccine would have been extremely distressing and disturbing to you.

You have asked me to explain how I came to give Emma the incorrect vaccine. I can only describe the course of events and what our practice intends to do to try to prevent something like this from happening again. When I went to the vaccine refrigerator to get Emma's vaccine, I took out the Vaxigrip box of vaccines. The chicken pox vaccine is under the brand names Varilix and Varivax. It is written in large letters on the front of the box that Vaxigrip is an influenza vaccine. I recall seeing the label 'government funded' on the box and, for reasons I cannot explain, this was consistent to me that it was a childhood vaccination. I then recorded the name on the computer. Even though it did not appear on the list of designated chicken pox vaccines, I assumed

that it was a new brand. All I can say is that I looked but I did not see.

You and your daughter trusted me to do the right thing and I know that I have let you down. I acknowledge your concerns that this incident has decreased your trust in me, and the medical profession. I apologise for the anxiety and distress that I have caused you. I acknowledge that you will be worried every time Emma develops a fever and you are concerned that there may be long term adverse sequelae from the convulsion and the flu vaccine. I understand the paediatrician at the hospital has discussed these concerns with you.

Our practice has discussed this incident with a view to trying to make sure that something similar does not happen again. In future, I will not administer a childhood immunisation without having the name checked by the registered nurse. Our practice will try to adhere to the surgery policy of giving childhood vaccinations on weekdays, when our nurses are conducting immunisation clinics, rather than providing routine immunisations on the weekend.

If you have any further questions or wish to discuss these issues with me again, I would be more than happy to do so.

Yours sincerely

Dr Davies'

Discussion

A review of adverse drug events and medication errors in Australia revealed that 2–4% of all hospital admissions were medication related.[1] Up to three-quarters of these events were preventable. Of 2500 reported incidents in general practice, half were medication related. Anticoagulants, nonsteroidal anti-inflammatories (NSAIDs), and cardiovascular drugs (including antihypertensives, diuretics, vasodilators and cardiac glycosides) made up over half of all potentially preventable medication related events. Antineoplastic drugs, opioids, steroids and antibiotics also featured prominently.

In this case, the GP administered an incorrect vaccine to a child. Some of the underlying causes of the incident were:

- Knowledge and experience
  - the GP was not familiar with the current immunisation schedule because the majority of childhood vaccinations in the practice were performed by the registered nurses
- Organisation of care
  - frequent changes to the immunisation schedule
  - the GP was rushed because he was overbooked
  - the patient was booked for a routine immunisation on a weekend, rather than on a weekday when the immunisation nurses were available.

Risk management strategies

Open disclosure refers to open communication when things go wrong in health care. Patients and their families may be upset and angry when they have suffered an adverse event and it is important to try not to become angry or react defensively in this situation. An adverse incident is an emotionally charged event for all parties, however, the prime concern is to support the patient. General practitioners should always seek advice from their MDO after an adverse event or outcome.

The *Open disclosure health professionals handbook* provides the following advice for dealing with an adverse event:

'Handy hints for discussions with the patient and their family:

- Arrange a face-to-face meeting that allows adequate time for detailed discussion as soon as possible after an adverse outcome has occurred
- Tell the patient at the beginning of the discussion how much time you have
- Listen actively and respectfully to the patient
- Always discuss the problem with the patient in an open manner
- Use plain English and avoid technical terms or jargon wherever possible, for instance use 'every day' words for body parts, diseases and procedures
- Spend time with the patient and offer support and concern for the situation that the patient now faces
- If a patient contacts you, prioritise to respond quickly as it indicates that you are taking the matter seriously
- Acknowledge the validity and intensity of the emotions the patient and/or carer may feel, including fear, anger and pain
- If the patient or their support person is angry find out why he or she is angry first. It is often futile to try and talk to them about something different from what they are angry about
- Where a carer or family member is also present, include them in your dialogue where appropriate
- In all discussions avoid defensiveness and laying blame. Avoid statements that include words such as fault, blame or feel responsible
- If you are the treating doctor, arrange any appropriate referral for further treatment
- Ensure the patient is closely followed up when a referral is made'.[2]

Conflict of interest: none.

References

1. Runciman WB, Roughead EE, Semple S, Adams RJ. Adverse drug events and medication errors in Australia. Int J Qual Health Care 2003;15(Suppl 1):i49–i59.
2. Safety and Quality Council. Open disclosure: health care professionals handbook, 2003.

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