

Red Allergy Bracelet Pilot Study



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With the participation of day ward and recovery room staff



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Background

This project was a Quality Initiative through “Lunch and Learn” at Midland Regional Hospital Mullingar in collaboration with staff in the day ward and theatre. According to the World Allergy Organisation drug allergy occurs in 3-5% of hospitalised patients¹. The prevalence of anaphylaxis is approximately 3% in Europe². Drug allergy is of major concern to the anaesthesiologist as anaphylaxis is a potentially catastrophic event causing 4.3% of deaths occurring around general anaesthesia³. The aim of this study was to introduce a new visual aid in order to increase patient safety in patients presenting to the day ward for surgery by reducing or negating the risk of a patient receiving a drug they are allergic to.

Methods

Between January and November 2018, day ward staff in Mullingar Hospital identified patients with allergy who were presenting for day surgery or day of surgery admission. Red allergy bracelets were placed and the allergen and nature of the reaction was written on the bracelet. Recovery room staff recorded whether bracelets had been applied to patients with allergy. The drug causing the allergic reaction was recorded as well as the nature of the reaction (anaphylaxis, rash, swelling, urticaria, wheeze, other).

Results

46 allergies were reported in total. The most frequently reported allergy was to penicillin (43.5%). Antibiotics accounted for 56.5% of reported allergies. 71.7% of reported allergies were deemed to be true allergies rather than recognised drug side effects. The most commonly reported manifestation of allergy

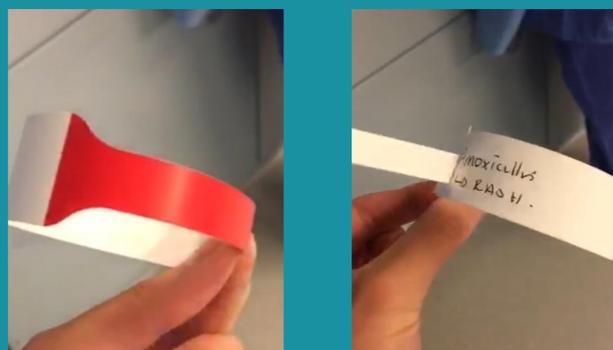
Table of results

Drug	Total reported	True Allergy	Bracelet applied
Penicillin	20	20	14
Macrolide	4	4	0
Clindamycin	1	1	1
Metronidazole	1	1	0
Stemetil	1	0	0
Asacolon	1	0	0
Tylex	1	0	1
Tramadol	1	0	1
Codeine	3	1	3
Pregabalin	1	0	1
Iron	2	1	1
Buscopan	1	0	1
Amlodipine	1	1	0
Diclofenac	3	1	2
Pethidine	1	0	1
Ibuprofen	1	0	1
Food	3	3	1

Figure 1

Reaction	Number reported
Anaphylaxis	1
Rash	26
Swelling	13
Urticaria	2
Wheeze	1
Unknown (childhood reaction)	3
Abdominal disturbance	5
Other	6

Figure 2



Red allergy bracelet used in this study

Results (continued)

was rash (45.6%) followed by swelling (22.8%). 3 patients reported an unknown childhood reaction to penicillin. The most commonly reported side effects were gastrointestinal disturbance, e.g. constipation / abdominal pain secondary to codeine / Tylex. Only 1 patient reported a history of anaphylaxis (to penicillin).

Discussion

Penicillin allergy is the most commonly reported drug allergy in the literature⁴ which the results from our study agree with. However between <10% and up to 20% of those reporting penicillin are truly allergic. Suspected penicillin allergy is often not verified by diagnostic testing⁵. This may have implications for patients as alternate antibiotic choices may be less suitable and this can lead to increased morbidity and mortality. Determining if an allergy is a true allergy can thus lead to treatment dilemmas for the clinician.

Conclusion

Allergy notification is important for the prevention of future episodes.

We re-emphasise the importance of identifying patients with drug allergy in order to avoid unnecessary morbidity and mortality.

We have determined that the red allergy bands are a simple but effective visual aid to help achieve this in addition to being cost effective.

We intend initiating a hospital-wide rollout and re-auditing.

References:

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