Table 1

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Gutierrez-Cebollada, <i>et al</i> 1992, Spain	76 heroin addicts admitted to the emergency department; 54 because of overdose and 22 seeking urgent medical care for unrelated causes	Survey and retrospective review	Factors contributing to non fatal overdose	Injection. High plasma concentrations of total morphine and benzodiazepines	Relatively small sample size. Large difference between sample size of overdose group and non-overdose group. Survey of events relied on self-report
Seal, <i>et al</i> , 2001, USA	1427 heroin injectors from 6 inner city neighbourhoods in San Francisco Bay area	Retrospective study	Variables associated with recent overdose	Drinking 4 or more units of alcohol per day (OR = 2.05). Having been arrested three or more times in the past year (OR = 2.50)	Targeted sampling techniques were used to recruit heroin users. May be inherent biases in self reported drug use and risk behaviour. Did not specify the type of drug overdose even though heroin injectors were studied
Brugal <i>et al</i> , 2002, Spain	2556 subjects treated for heroin dependence in 164 outpatient facilities. Two patient groups of daily and non-daily heroin users	Prevalence of overdose in emergency care in 12 months before treatment admission. Case control design with OR adjusted by logistic regression and case crossover design	Most significant risk factors	Injection. Risk increases with increasing usual frequency of heroin injection in daily users	Cross sectional design may have survival or recall bias. The definition of overdose is self perceived. The sample may not be representative of all heroin users as street samples often fail to represent newer heroin users. Effect period for heroin was 24 hours and was an overestimation
Dietze, <i>et al</i> , 2005, UK	155 patients recruited by paramedics who had been unconscious and responded to naloxone	Survey about behaviour prior to an overdose, case crossover design	Risk behaviours prior to overdose as opposed to a non overdose injection	Increased use of benzodiazepines and alcohol in the 12 hours before overdose. Large dose of heroin used	No data for hazard periods in fatal overdose. Amount of heroin used was self reported. Wasn't possible to accurately determine response rate

Management of burns blisters

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A short cut review was carried out to establish whether leaving intact, deroofting, or aspirating the blisters of partial thickness burns best minimised infection and promoted healing. In total, 153 papers were found using the reported searches, of which one presented the best evidence to answer the clinical question. The author, date and country of publication, patient group studied, study type, relevant outcomes, results and study weaknesses of this best paper are tabulated. It is concluded that the evidence remains poor, but that leaving the blister intact seems to reduce infection rates and should therefore be the default option.

Clinical scenario

A 30 year old chef attends the emergency department, having sustained burns to his forearm from hot fat. Clinical examination reveals blistering to the area and some erythema. You are not sure whether to leave, aspirate, or

completely derooft the blisters, and wonder if there is any research to point you in the right direction.

Three-part question

In [adults with partial thickness burns] is [de-roofing or aspirating the blisters better than conservative management] in [minimising infection and promoting healing]?

Search strategy

Ovid MEDLINE 1966 to May week 2 2006, EMBASE 1980 to week 20 2006, CINAHL 1982 to May week 2 2006 using multifile searching: [exp Blister/OR blister\$.mp. OR burn blister.mp.] AND [aspiration.mp. OR derooft\$.mp. OR debridement\$.mp. OR drain\$.mp.].

The Cochrane Library Issue 2 2006: blister [MeSH]: 64 identified, none relevant.

Outcome

There were 153 papers identified in Medline of which one was relevant.

Comments

There seems to be a paucity of good clinical evidence related to this subject, despite several review articles. The sole paper found involved a small sample, but showed infection rates to be higher if blisters are aspirated or deroofted, and that pain scores were higher in the group that underwent deroofting.

Table 2

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Swain AH <i>et al</i> , 1987, UK	202 patients with partial thickness thermal burns. Left intact v aspirated v exposed	Controlled trial	Infection rates at 10 days Pain reduction (aspiration v deroofting) Pain increase (aspiration v deroofting)	15% v 73% v 78% (p<0.05) 34% v 0% 19% v 43%	Small numbers. Randomisation unclear and numbers inconsistent

► CLINICAL BOTTOM LINE

Based on the current available evidence, blisters should, wherever possible, be left intact to reduce the risk of infection, but if anatomical position necessitates intervention for functional purposes, aspiration appears to result in less pain than deroofing.

1 Swain AH, Azadian BS, Wakeley CJ, *et al.* Management of blisters in minor burns. *Br Med J (Clin Res Ed)* 1987;**295**:181.

Prophylactic antibiotics in urinary catheterisation to prevent infection

Report by F Garnham, C Smith, *Specialist Registrars in Emergency Medicine*

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A short cut review was carried out to establish whether prophylactic antibiotics reduced the incidence of urinary tract infection in patients requiring urinary catheterisation for acute urinary retention. In total, 104 papers were found in Medline, 81 in Embase and 2 in the Cochrane database using the reported searches, of which 1 presented the best evidence to answer the clinical question. The authors, date and country of publication, patient group studied, study type, relevant outcomes, results and study weaknesses of this best paper are tabulated. It is concluded that the evidence of benefit is too poor to recommend routine use of prophylactic antibiotics in the emergency department.

Clinical scenario

A 70 year old gentleman presents to the emergency department in acute urinary retention. You decide to catheterise him. Your senior house officer tells you that when he was in a Urology department it was standard practice to give systemic antibiotics to any patient catheterised post operatively. You wonder whether the patient in front of you needs them.

Three part question

In [patients requiring urinary catheterisation for acute urinary retention] are [prophylactic antibiotics better than

no antibiotics] at [reducing the incidence of urinary tract infection]?

Search strategy

Ovid MEDLINE 1966 to May week 1 2006, EMBASE 1980 to 2006 week 19 using multifile searching: [urinary catheter.mp OR urinary catheterization.exp OR exp.catheterization] AND [infection.exp] AND [prophylaxis.mp OR antibiotic, prophylaxis.exp] AND [urin\$] LIMIT human, English, abstracts

The Cochrane Library Issue 2 2006: urinary catheterization [MeSH] AND (antibiotic prophylaxis [MeSH] OR prophyla* [title, abstract, keywords])

Outcome

There were 104 papers identified in Medline, 81 in Embase and 2 in Cochrane. One paper was a systematic review that was relevant.

Comments

Many papers were found in the search that examined the use of antibiotics for the prophylaxis of urinary instrumentation during surgery, or in the management of patients with long term problems requiring intermittent catheterisation. Such patients are very different from those found in the emergency department. Similarly, epidemiological papers looking at incidence of infection in hospitalised patients show lower levels of infection in those taking antibiotics for other reasons. No papers directly addressed the issue of the patient presenting to the emergency department.

The paper presented suggests a role for antibiotics but only in patients requiring medium term catheterisation. Another consideration is the potential for the development of bacterial resistance in the patient and in the general population.

The evidence for catheterisation in the emergency patient described is far from conclusive and cannot be routinely recommended. However, there will be high risk patients in whom it may be appropriate.

► CLINICAL BOTTOM LINE

There is insufficient evidence to recommend the routine use of prophylactic antibiotics in the management of acute urinary retention presenting to the emergency department.

1 Niel-Weise BS, van den Broek PJ. Antibiotic policies for short-term catheter bladder drainage in adults. *Cochrane Database Syst Rev* 2005;**3**:CD005428.

Table 3

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Niel-Weise, BS, van den Broek PJ, Netherlands, 2005	Three trials of hospitalised adults undergoing non-urological surgery who had postoperative bladder drainage	Systematic review	Antibiotic prophylaxis compared with giving antibiotics when clinically indicated. Antibiotic prophylaxis compared with giving antibiotics when microbiologically indicated	Only 1 relevant paper: significantly lower symptomatic UTI rate in the group receiving prophylactic antibiotics (RR 0.20, 95% CI 0.06 to 0.66). Five to eight fold fewer cases of bacteriuria amongst those allocated prophylactic antibiotics	Observation based on only 16 cases of infection in women in one small trial. Data too heterogeneous to allow meta-analysis

UTI, urinary tract infection.