

Table 3

Author, date, and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Zubowicz VN and Gravier M, 1991, USA	48 patients with early (<24 hour) human bites to the hand	Prospective randomised controlled trial	Infection rate: placebo v oral cephalosporin v IV cephalosporin + penicillin G	Infection rate: 46.7% placebo v 0% oral/IV antibiotic (p<0.05)	Small study population within each group
Broder J <i>et al</i> , 2004, USA	127 patients with early (<24 hour) superficial human bites excluding to the hand, feet, or skin overlying joints	Prospective double blind placebo controlled trial	Infection rate: placebo v oral cephalosporin/penicillin	Infection rate: 1.6% placebo v 0% antibiotic (p>0.05)	Only investigated low risk bites

Comment(s)

There are many studies in the literature which compare intravenous with intramuscular NSAID use in acute renal colic. Unfortunately no studies were found comparing intramuscular NSAIDs with rectal NSAIDs, which are commonly used in our emergency departments. Rectal NSAIDs have advantages in busy departments by providing urgent analgesia when there are delays in staff available to cannulate the patient and the patient is vomiting.

► CLINICAL BOTTOM LINE

Rectal NSAIDs are an effective form of analgesia for patients with acute renal colic and have fewer side effects compared with intravenous NSAIDs.

Nelson CE, Nylander C, Olsson AM, *et al*. Rectal v. intravenous administration of indomethacin in the treatment of renal colic. *Acta Chir Scand* 1988;**154**:253–5.
Nissen I, Birke H, Olsen JB, *et al*. Treatment of ureteric colic. Intravenous versus rectal administration of indomethacin. *Br J Urol* 1990;**65**:576–9.

Are antibiotics indicated following human bites?

Report by **Dr Alma-Victoria Rittner and Dr Kevin Fitzpatrick, Senior House Officers**

Checked by **Dr Alasdair Corfield, Registrar**
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Abstract

A short cut review was carried out to establish whether antibiotics are indicated for human bites. Eighty nine papers were found using the reported search, of which two represent 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 these best papers are tabulated. Prophylactic antibiotics should be given to all patients with human bites to the hands, feet, and skin overlying joints or cartilaginous structures, and to all patients with bites that penetrate deeper than the epidermal layer.

Three part question

In [healthy adults sustaining a human bite] do [prophylactic antibiotics] reduce [the incidence of infection]?

Clinical scenario

A healthy 25 year old man involved in an altercation with another man sustains a bite wound on the arm and presents to the Accident and Emergency Department. The wound is thoroughly cleaned and no signs of infection are present. You wonder whether prophylactic antibiotics are indicated to reduce the risk of wound infection in this patient.

Search strategy

Medline (1996–11/03) and Embase (1980–04/05). [human bites.mp OR exp Bites, Human/] and [penicillin.mp OR exp

Penicillins OR antibiotics.mp OR exp Anti-Bacterial Agents OR erythromycin.mp OR ERYTHROMYCIN OR augmentin. mp OR exp Amoxicillin-Potassium Clavulanate Combination OR cephalosporin.mp OR exp CEPHALOSPORINS/] and wound infection.mp OR exp Wound Infection OR exp Postoperative Complications OR exp Bacterial Infections OR exp Surgical Wound Infection/or infection rate.mp] LIMIT to human and English language. Cochrane Edition 1 2005: “human bites”.

Search outcome

Medline and Embase: the search produced 89 papers, two of which were relevant to the original question. Cochrane: 32 citations. One review on mammalian bites. No new relevant papers on human bites found.

Comment(s)

The first study showed a clear benefit of giving prophylactic antibiotics for human bites to the hand. The second study did not demonstrate any significant reduction of infection rate with antibiotics for low risk superficial human bites, which were defined as those bites that penetrated only the epidermis and did not involve the hands, feet, or skin overlying joints or cartilaginous structures. It may be that antibiotic treatment of the low risk bites described is unnecessary. Until further studies show no reduction in infection rates for human bites, antibiotics should be given to all patients except those presenting with superficial bites outwith the areas described above. No prospective randomised controlled trials have investigated which particular antibiotics should be prescribed, and therefore antibiotic choice should follow local guidelines until studies have shown a particular antibiotic to be the most effective.

► CLINICAL BOTTOM LINE

Prophylactic antibiotics should be given to all patients with human bites to the hands, feet, and skin overlying joints or cartilaginous structures, and to all patients with bites that penetrate deeper than the epidermal layer.

Zubowicz VN, Gravier M. Management of early human bites of the hand: a prospective randomized study. *Plast Reconstr Surg* 1991;**88**:111–14.
Broder J, Jerrard D, Olshaker J, *et al*. Low risk infection in selected human bites treated without antibiotics. *Am J Emerg Med* 2004;**22**:10–13.

Nebulised furosemide in acute adult asthma

Report by **Zui-Shen Yen, Emergency Physician**
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doi: 10.1136/emj.2005.028670

Abstract

A short cut review was carried out to establish whether the addition of nebulised furosemide to beta-agonist therapy improves outcomes in acute asthma. Altogether 87 papers