- Chen CC, Wang SS, Chao Y, *et al*. C-reactive protein and lactate dehydrogenase isoenzymes in the assessment of the prognosis of acute pancreatitis. *J Gastroenterol Hepatol* 1992;**7**:363–6.
- Rau B, Cebulla M, Uhl W, *et al*. The clinical value of human pancreas-specific protein procarboxypeptidase B as an indicator of necrosis in acute pancreatitis: comparison to CRP and LDH. *Pancreas* 1998;**17**:134–9.

Emerg Med J 2008;**25**:687–688.
doi:10.1136/emj.2008.065680

BET 3

TRAINING AND PRESCRIPTION OF NALOXONE FOR PERSONAL USE IN OVERDOSE FOR OPIATE ADDICTS

Report by: Jenifer Barrie, *Medical Student*
Search checked by: Kevin Mackway-Jones, *Consultant*
Institution: Manchester Royal Infirmary, Manchester, UK

A short-cut review was carried out to establish whether the training of intravenous drug users in the use of naloxone and the prescription of that drug to those users reduces mortality from opiate overdose. A total of 87 papers was found using the reported searches, of which three 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 these best papers are tabulated. It is concluded that there is a lack of sound evidence to suggest that the benefits of take-home naloxone outweigh the risks. Careful evaluation of local circumstances is necessary when considering this option.

CLINICAL SCENARIO

An ambulance arrives at the emergency department with a patient who is said to have taken a heroin overdose. On arrival the patient has a Glasgow coma scale score of 14, with no signs indicative of opiate overdose. The friend that accompanied him in the ambulance claims to have injected him with some naloxone he obtained. You wonder if there is any convincing evidence that known addicts should be given naloxone to administer to other addicts in order to prevent deaths from overdose.

THREE-PART QUESTION

[In opiate addicts] does [training and prescription of naloxone for personal use] reduce [the mortality from opiate overdose].

SEARCH STRATEGY

Ovid MEDLINE(R) 1950 to June week 4 2008 [exp NALOXONE AND (overdose.mp OR exp overdose/) AND exp Opioid-Related Disorders}] Limit to humans, English Language. EMBASE 1980 to 2008 week 26. [exp NALOXONE/AND overdose.mp. AND exp Opiate Addiction/] LIMIT to human and english language.

OUTCOME

Medline: 54 papers were found, one of which was a review published in 2005 and two further papers reported work postdating the review. Embase: 61 papers found of which none were unique and contained relevant data. The three papers are summarised in the table.

COMMENTS

Much of the literature found on this topic, although reporting no data, has argued for or against take-home naloxone. Some argue that the need for naloxone is greater when users fear that law enforcement agencies will be notified if emergency medical services are called. Others worry about the implementation of user naloxone prescriptions leading to more risky drug taking. Many workers in this area believe that lives will be saved with rapid, available treatment and that this treatment will only be available from peers. Despite the apparent successes reported it is important to recognise the flaws in the research and the lack of follow-up for patients who have received

Clinical bottom line

There is a lack of sound evidence to suggest that the benefits of take-home naloxone outweigh the risks. Careful evaluation of local circumstances is necessary when considering this option.

Table 3 Training and prescription of naloxone for personal use in overdose for opiate addicts

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Baca and Grant, 2005	6 Papers reporting naloxone distribution programmes	Review	"Lives saved"	Over 200 plus various reports of use	Outcomes reported are unwitnessed self-reports and therefore anecdotal
					All reports uncontrolled
Seal *et al*, USA, 2005	24 Intravenous drug users (12 pairs of injection partners)	Observational	Overdoses witnessed by study subjects	20	Small pilot study
	Trained in CPR and naloxone administration		CPR performed	16/20	Uncontrolled
	Followed up for 6 months		Naloxone administered	15/20	
			Overdose survivors	20/20	
Maxwell *et al*, USA, 2006	Chicago Recovery Alliance, a voluntary programme, trains intravenous users and their close associates and prescribes naloxone. Programme piloted 1998 and expanded in 2000	Observational	Peer overdose reversal reports	319	"Informal reports" of reversals only
			Heroin overdose deaths in Cook County in		Uncontrolled
			2000	466	Mortality data can be confounded by numerous other factors. Mortality has in fact fallen back to the 1997 rate
			2001	374	
			2002	344	
			2003	324	

CPR, cardiopulmonary resuscitation.

naloxone, a drug with known complications. A properly designed trial may well be impossible in this area—but the evidence of potential harm and benefit requires careful evaluation whenever this sort of programme is considered.

- Baca CT, Grant KJ. Take-home naloxone to reduce heroin death. *Addiction* 2005;**100**:1823–31.
- Seal KH, Thawley R, Gee L, *et al*. Naloxone distribution and cardiopulmonary resuscitation training for injection drug users to prevent heroin overdose death: a pilot intervention study. *J Urban Health* 2005;**82**:303–11.
- Maxwell S, Bigg D, Stanczykiewicz K, *et al*. Prescribing naloxone to actively injecting heroin users: a program to reduce heroin overdose deaths. *J Addictive Dis* 2006;**25**:89–96.

Emerg Med J 2008;**25**:688–689.
doi:10.1136/emj.2008.065698

BET 4

DO FANS SPREAD INFECTION IN CLINICAL AREAS?

Report by: Rick Body, *Specialist Registrar*
Search checked by: Kevin Mackway-Jones, *Consultant*
Institution: Manchester Royal Infirmary, Manchester, UK

A short-cut review was carried out to establish whether there is any evidence that the use of fans spreads infection in clinical areas. A total of 102 papers was 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 there is no evidence that fans spread infections in clinical areas.

CLINICAL SCENARIO

It is midsummer's day in a busy emergency department and it is sweltering outside. Your impervious uniform (that the hospital insist you should wear for health and safety reasons) is moist with sweat. The temperature is 30°C and you are rushing around, like usual, trying to do three things at once. You decide that you need to turn an electric fan on but when you look you can't find any. The nurse in charge tells you that Infection Control have removed all of the fans because they spread infection. The air conditioning has been out of use for a long time because it, too, apparently spreads infection.

You wonder whether there is actually any evidence that electric fans spread infection or whether it is more of a risk for hot and bothered patients to be treated by an overheated, dehydrated, sweaty doctor.

THREE-PART QUESTION

In [clinical areas] does [the use of electric fans] lead to [increased infection rates in staff or patients]?

SEARCH STRATEGY

EMBASE 1980 to 2008 week 30. Ovid MEDLINE(R) 1950 to July week 4 2008. CINAHL 1982 to July week 4 2008 using multifile searching [fan.mp.OR fans.mp.] AND [exp Infection Control/ OR exp Bacteremia/ OR exp Septicemia/ OR exp Infection Prevention/ OR exp Airborne Infection/ OR exp Infection Rate/ OR exp Infection Risk/ OR exp Infection/ OR (infection.mp. OR bacteraemia.mp. OR septicaemia).mp.

Google: "infection, hospital, fan"; "workplace temperature regulations" [Search conducted 31/07/08].

The Cochrane Library Issue 2 2008. (fans):ti,ab,kw 64 records none relevant.

OUTCOME

The search found: 84 papers in MEDLINE, 63 in EMBASE, two in CINAHL, five in CCRCT and two in CDSR and one was relevant to the three-part question. No relevant papers were found using Google, although several items are discussed. The single paper is shown in the table.

COMMENTS

There is no published evidence that electric fans spread infection in clinical areas. There were no published data on the growth of concerning organisms on fans and their aerosolisation. There were no case reports of high infection rates associated with the use of worktop electric fans. The only relevant paper found that a fanning system could not be used to spread viral infection in a pig model. Surprisingly, regulations do not state a maximum workplace temperature. However, they do state that "during working hours, the temperature in all workplaces inside buildings shall be reasonable" (Health and Safety Executive). Current regulations also state that: "Where a reasonably comfortable temperature cannot be achieved throughout a workroom, local cooling should be provided. In extremely hot weather fans and increased ventilation may be used instead of local cooling".

Clinical bottom line

There is no evidence that electric fans spread infection in clinical areas.

- Trincado C, Dee S, Jacobson L, *et al*. Attempts to transmit porcine reproductive and respiratory syndrome virus by aerosols under controlled field conditions. *Vet Rec* 2004;**154**:294–7.
- Health and Safety Executive. What is the maximum/minimum temperature in the workplace? http://www.hse.gov.uk/contact/faqs/temperature.htm (accessed 31 July 2008).

Emerg Med J 2008;**25**:689.
doi:10.1136/emj.2008.065706

BET 5

STEROIDS IN ATTEMPTED HANGING

Report by Rachel Jenner
Search checked by Dr Paul de Keyser
Specialised Registrar Paediatrics London
Institution: Manchester Royal Infirmary, Manchester, UK

A short-cut review was carried out to establish whether the prophylactic

Table 4 Do fans spread infection in clinical areas?

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Trincado *et al*, 2004, USA	10 Non-infected pigs were placed in a building 10 m away from a fan-ventilated furnishing facility containing 150 5-month-old pigs who were infected with porcine reproductive and respiratory syndrome virus	Experimental	Infection rate in the initially non-infected pigs	No pig developed an infection	Purely experimental
	The two airspaces were connected via the fan, which was turned on 24 h per day				Not directly relevant to the three-part question, as emergency departments are usually (slightly) different to barns

BET 3 TRAINING AND PRESCRIPTION OF NALOXONE FOR PERSONAL USE IN OVERDOSE FOR OPIATE ADDICTS

Emerg Med J 2008 25: 688-689
doi: 10.1136/emj.2008.065698

Notes