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# ABSTRACTS

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EMERGENCY DEPARTMENT, OTOLARYNGOLOGIC, USE PATTERNS

## Patient profile of an otolaryngologic emergency department

Granick MS, Obeiter RD
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The patient population seen in an urban otolaryngologic emergency department is described. During an eight-month period, 2,504 visits occurred. Seventy-two percent were seeking primary treatment, and 80% of the visits were made between 8 AM and 7 PM. Ear problems accounted for 61% of the presenting complaints and 49% of the diagnoses, with cerumen and external otitis being the most common diagnoses. Epistaxis, a true ENT emergency, represented only 5% of the visits and was the only diagnosis that occurred regularly in the night and early morning. Most diseases seen were common disorders readily treated by a primary care physician. The frequency of complaints was similar to that seen in an otolaryngologic practice. The authors conclude that an otolaryngologic ED functions as an extended-hour, walk-in clinic with poor cost-effectiveness. They suggest screening of emergency patients in a general ED with triage to an ENT specialist.

*Judith Brillman, MD*

INTRACRANIAL PRESSURE MONITORING, PEDIATRIC; PEDIATRIC, ICP MONITORING

## Intracranial pressure monitoring as a guide to prognosis in the nearly drowned, severely comatose child

Nussbaum E, Galant SP
*J Pediatr* 102:215-218
Feb 1983

The authors examined the usefulness of intracranial pressure (ICP) monitoring in 21 near-drowning patients who presented in flaccid coma. Patients in coma who exhibited decorticate or decerebrate posturing were excluded. Patients were treated according to a standard protocol. ICP and cerebral perfusion pressures (CPP) were measured hourly. Six children had complete recovery (ICP = 9.3 ± 1.5, CPP = 18.8 ± 4.1), ten children died (ICP = 33.4 ± 4.3 and CPP = 27.3 ± 5), and five survived with brain damage (ICP = 14.6 ± 2 and CPP = 72.2 ± 4.6). There was a significant difference between the ICP and CPP of survivors as compared to fatalities. Ninety-two percent of patients with ICP $\leq$ 20 and CPP $\geq$ 50 survived, while 100% of patients with ICP > 20 and CPP < 50 died. There was no significant difference in ICP and CPP between those who recovered completely and those who sustained brain damage. The authors conclude that ICP monitoring is a safe, useful means of predicting survival or death in the nearly drowned, severely comatose child, but not in distinguishing which will sustain residual brain damage. Further studies may indicate whether prognosis can be determined soon after admission and whether therapy that alters cerebral perfusion can improve prognosis.

*Kurt Zangerle, MD*

ASTHMA, BRONCHODILATORS; BRONCHODILATORS, ASTHMA

## Comparison of bronchodilator effectiveness of fenoterol and isoetharine

Bynum L, Gross G, Loudermilk J
*Ann Allergy* 50:252-255
Apr 1983

The use of inhaled bronchodilators for acute asthma has become common practice in emergency departments, but the search continues for the agent with the greatest specificity and duration of effect. The authors conducted a double-blind clinical trial of 57 patients to compare fenoterol and isoetharine. Patients with evidence of life-threatening problems or other significant illness were excluded. The severity of airway obstruction was similar in each group. Similar doses of the medications were adminstered as per the manufacturer's recommendations via IPPB machines (0.5 mL diluted in 2.5 mL of saline). Forced expiratory volume in one second ($FEV_1$), forced mid-expiratory flow (FMEF), forced vital capacity (FVC), peak expiratory flow rate (PEFR), dyspnea, wheezing, pulse and respiratory rate were assessed at baseline, 10 and 30 minutes, and 1, 2, 3, and 4 hours after a single-dose treatment. A treatment was declared a success if there was improvement of clinical signs and $FEV_1$ (at least 15% over baseline) at 30 minutes that did not reverse during the observation period. The data were examined as a whole and then using only those patients who presented with an $FEV_1$ less than 70% of predicted. Overall both agents produced similar results at 30 minutes; however, at four hours there was a considerable difference in successful treatment rates (55% for fenoterol vs 10.7% for isoetharine). For the patients with $FEV_1$ less than 70% of predicted values, the agents produced similar results at 30 minutes (80% fenoterol success rate, and 87.5% isoetharine success rate). Again, at four hours there was a considerable difference in successful treatment rates (70% for fenoterol vs 18.8% for

isoetharine). Twelve fenoterol patients reported adverse side effects (eg, tremors) versus seven treated with isoetharine, but the distribution and severity in the two groups were judged as similar. The authors conclude that both fenoterol and isoetharine appear to be initially effective, but fenoterol has a longer duration of action and, therefore, should be a useful addition to the group of selective bronchodilators.

*Kurt Zangerle, MD*

COUNTERSHOCK, CARDIAC DAMAGE; PROPRANOLOL; SHOCK ENERGY; VERAPAMIL

## The effects of shock energy, propranolol, and verapamil on cardiac damage caused by transthoracic countershock

Patton JN, Allen JD, Pantridge JF
*Circulation* 69:357-368
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The authors investigated how various shock energies and premedication with propranolol and verapamil can alter cardiac damage due to transthoracic countershock. Five groups of six dogs each were submitted to the following IV solutions and shock energies: Group I: IV saline, followed by 10 shocks of 400 joules; Group II: IV saline, followed by 20 shocks of 200 joules; Group III: IV saline, followed by 40 shocks of 100 joules; Group IV: IV propranolol, followed by 10 shocks of 400 joules; Group V: IV verapamil, followed by 10 shocks of 400 joules. Myocardial damage was assessed by ECG loss of R waves and ST segment elevation, creatine kinase depletion from myocardial tissue, and gross and microscopic cardiac tissue examination. It was found that 4,000 joules of energy divided into 10 shocks caused more myocardial damage than when delivered via 20 or 40 shocks. Pretreatment with verapamil resulted in significantly less tissue damage macroscopically, histologically, and as measured by CK depletion. Pretreatment with propranolol had no effect. The authors discuss possible mechanisms for the tissue damage variance with shock energy, and note that the need for higher shock energies has not been proven. They also propose that the protective effects of verapamil are due to the prevention of calcium influx into myocardial tissue.

*Gary Halvorson, MD*

INTESTINAL INFARCTION; MESENTERIC INFARCTION

## Prevention of intestinal infarction resulting from mesenteric arterial occlusive disease

Kwaan JHM, Connolly JE
*Surg Gynecol Obstet* 157:321-324
Oct 1983

In an effort to decrease the mortality of mesenteric infarction, the records of 25 patients were retrospectively reviewed to determine premonitory symptoms that might permit earlier diagnosis. Patients with evidence of arteriosclerotic occlusion of the mesenteric arteries at surgery or postmortem examination were included. Patients with mesenteric embolism were excluded. All patients were male, age 65 to 79 years. Past medical histories included 18 patients with hypertension, 14 patients with an old MI, eight patients with diabetes, five patients with previous CVA, and four patients with previous vascular bypass. Sixteen patients had discernible weight loss within the last year. Fourteen patients had previous abdominal pain or pain labeled as peptic ulcer. Examination had previously revealed an abdominal bruit in 14 patients. All patients had been hospitalized within the previous year, with diagnoses including 16 with ulcer disease, nine with gallbladder disease, six with diverticulitis, four with chronic intestinal obstruction, and four with abdominal angina. Diagnostic tests were all nondiagnostic, including 12 upper gastrointestinal series, ten barium enemas, and eight cholecystographies. Twenty of 25 patients (80%) died. The authors note that all patients had obvious forewarning signs, such as persistent abdominal pain, weight loss, or the presence of another arteriosclerotic disease or abdominal bruit. They conclude that physicians must heighten their awareness of mesenteric ischemia. Excessive investigation that does not include lateral aortography may lead to unnecessary and lethal delays. *[**Editor's note:** The retrospectoscope again sees clearly the symptoms that muddy a clinician's work up. Mesenteric thrombosis is extremely difficult to predict or prevent.]*

*Richard C Dart, MD*

HERPESVIRUS, TZANCK SMEAR; TZANCK SMEAR; VIRAL INFECTION, TZANCK SMEAR

## The Tzanck smear in the diagnosis of cutaneous herpes simplex

Solomon AR, Rasmussen JE, Varani J, et al
*JAMA* 251:633-635
Feb 3, 1984

This study compared the accuracy of the Tzanck preparation with that of viral cultures in diagnosing cutaneous herpes simplex. The subjects consisted of 30 consecutive patients with primary or recurrent disease featuring grouped vesicles on an erythematous base as the initial signs. Lesions were classified as vesicles, pustules, or ulcer-crust. Viral cultures and Tzanck smears were obtained from the bases of freshly opened lesions. Tzanck smears were prepared by allowing the lesion material to air-dry on a slide. Toluidine blue stain was then applied for 15 seconds, followed by tap water rinsing. For a slide to be interpreted as positive, multinucleated giant cells with faceted nuclei and homogeneously stained "ground-glass" chromatin were required. Results revealed that only 78% of the cultures were positive, with 53% of the Tzanck smears positive. Vesicles were most likely to yield a positive result (100% positive cultures, 66.7% positive smears). Pustules yielded positive cultures in 72.8%, and positive smears in 54.5%. Crusted-