

*fluenzae* may be increasing in incidence.<sup>2</sup> Since the presence of a type b capsule does not appear to be necessary for the development of neonatal sepsis, further study is needed to define the properties of *H. influenzae* biotypes II and III that allow colonization of the maternal genital tract and subsequent infection of the neonate.

MARY E. RETTER, MD, FRCP[C]  
ROBERT M. BANNATYNE, MB, CH B,  
DIP BACT, FRCP[C]  
Department of bacteriology  
Hospital for Sick Children  
Toronto, Ont.

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## *Shigella sonnei* resistant to cotrimoxazole

*To the editor:* During the past 7 months we have isolated cotrimoxazole (trimethoprim-sulfamethoxazole)-resistant strains of *Shigella sonnei* from 18 patients. Except for one instance the infections appear to have been acquired in Canada,

the exception being in a Korean child who was probably infected while travelling outside Canada.

Epidemiologic data concerning the indigenous cases are not yet complete. In two instances resistant strains were isolated from two members of one family. While in the remaining patients no immediate family relationships have been discerned, at least five unrelated patients were from the same Indian reserve. Other patients were from other parts of Alberta or adjacent areas of the Northwest Territories.

Antibiotic resistance patterns of *Shigella* strains isolated in Alberta last winter indicate two dominant lines of *S. sonnei* originating in distinct geographic areas. The strain from northwestern Alberta was resistant to ampicillin, sulfonamides and tetracyclines, and that from eastern Alberta was resistant to sulfonamides and tetracyclines but sensitive to ampicillin. Cotrimoxazole-resistant strains have been isolated from patients infected with each type of strain. More recently the northwestern strain appears to have been replaced by the eastern one.

The minimum inhibitory concentrations of trimethoprim are generally low, ranging between 50 and 100 µg/ml. Thus far we have been unable to either transfer the trimethoprim resistance to *Escherichia coli* K 12 or to mobilize it for transfer by adding two different plasmids to the in vitro transfer test system, although some of the accompanying resistances have readily been transferred. Detailed studies of the Korean strain have yet to be undertaken.

Routine monitoring of antibiotic resistance in the enteric investigative unit of the Provincial Laboratory of Public Health in Edmonton has revealed rare instances of cotrimoxazole resistance in *Salmonella* and in one serotype of *E. coli* that is part of the "normal" fecal flora of children in hospital. There is good evidence that the resistant *Salmonella* strains were acquired outside Canada.

Bannatyne and colleagues<sup>1</sup> and Taylor, Keystone and Devlin<sup>2</sup> have also reported the isolation of trimethoprim-resistant shigellae. Our

# Reglan® (metoclopramide hydrochloride)

**CLASSIFICATION:** Reglan® brand of metoclopramide hydrochloride is a modifier of upper gastrointestinal tract motility.

**INDICATIONS:** Reglan is indicated as an adjunct in the management of delayed gastric emptying associated with subacute and chronic gastritis and sequelae of surgical operations such as vagotomy and pyloroplasty. In such indications, when there is delayed gastric emptying, Reglan may relieve symptoms such as nausea, vomiting, bloating and epigastric distress. Reglan has been found useful in facilitating small bowel intubation.

**CONTRAINDICATIONS:** Reglan should not be administered to patients in combination with MAO inhibitors, tricyclic antidepressants, sympathomimetics or foods with high tyramine content, since safety of such an association has not been established. As a safety measure, a two-week period should elapse between using any of these drugs and administration of Reglan.

The safety of use of Reglan in pregnancy has not been established. Therefore, Reglan should not be used in women of child-bearing potential unless in the opinion of the physician expected benefits to the patient outweigh the potential risks to the fetus.

**WARNINGS:** Drugs with atropine-like action should not be used simultaneously with Reglan since they have a tendency to antagonize the effects of this drug on gastrointestinal motility. Reglan should not be used in conjunction with potent ganglioplegic or neuroleptic drugs or drugs with acetylcholine-like action since potentiation of effect may occur. Additive sedative effects may occur when Reglan is administered concurrently with sedatives, hypnotics, narcotics or tranquilizers.

**PRECAUTIONS:** Reglan should not be used in patients with epilepsy and extrapyramidal syndromes unless its expected benefits outweigh the risk of aggravating these symptoms. Reglan does not appear to aggravate the manifestations of Parkinson's disease in patients treated with L-dopa. In view of the risk of extrapyramidal manifestations, metoclopramide should not be used in children unless a clear indication has been established.

The recommended dosage of Reglan should not be exceeded since a further increase in dosage will not produce a corresponding increase in the clinical response. The dosage recommended for children should not exceed 0.5 mg/kg daily.

Since metoclopramide accelerates abnormally slow gastric and small bowel peristaltic activity, it may change absorption of orally administered drugs. The absorption of drugs from the small bowel may be accelerated (e.g., acetaminophen, tetracycline, L-dopa, etc.), whereas absorption of drugs from the stomach may be diminished (e.g., digoxin).

**ADVERSE REACTIONS:** Drowsiness, fatigue and lassitude occur in approximately 10 percent of patients at recommended dosage. Less frequent adverse reactions, occurring in approximately 5 percent of patients, are: insomnia, headache, dizziness or bowel disturbances.

Parkinsonism and/or other extrapyramidal symptoms have been reported in approximately 1 percent of patients. They consist most often of a feeling of restlessness, facial grimacing, involuntary movement, rarely may manifest as torticollis, muscular twitching, oculogyric crisis, rhythmic protrusion of tongue or trismus. Such reactions appear to occur more frequently in children and young adults, and particularly at higher-than-recommended dosage. An increase in the frequency and severity of seizures has been reported in conjunction with the administration of Reglan to epileptic patients.

**SYMPTOMS AND TREATMENT OF OVERDOSAGE:** Extrapyramidal side effects as described in the preceding section are the most frequently reported adverse reaction to overdosage. Management of overdosage consists of gastric emptying, close observation and supportive therapy. Antiparkinson and antihistamine/anticholinergic drugs such as diphenhydramine hydrochloride have effectively controlled extrapyramidal reactions.

**DOSAGE AND ADMINISTRATION:** Note: Total daily dosage must not exceed 0.5 mg/kg body weight. **Adults:** Tablets: 1/2 to 1 tablet (5-10 mg) three or four times a day before meals and at bedtime. Syrup: 5 to 10 ml (5-10 mg) three or four times a day before meals and at bedtime. **Injectable:** When parenteral administration is required, one ampule (10 mg) i.m. or i.v. (slowly), two or three times a day if necessary. **Children:** (5-14 years): Syrup: 2.5 to 5 ml (2.5-5 mg) three times a day before meals.

For small bowel intubation: **Adults:** One ampule (10 mg) slowly i.v. — preferably at the time when the tip of the tube reaches the pyloric region. **Children:** Single dose of 0.1 mg/kg slowly i.v.

**Availability:** Tablets: Each blue scored compressed tablet contains 10 mg of metoclopramide monohydrochloride. Available in bottles of 100 and 500 tablets. DIN 386014. Syrup: Each ml contains 1 mg of metoclopramide monohydrochloride. Available in bottles of 4 fl. oz. DIN 386022. **Injectable:** Each 2 ml ampule contains 10 mg of metoclopramide monohydrochloride in a clear, colorless solution. Keep away from light and heat. Available in boxes of 5 and 50 ampules. DIN 386006. Product monograph available on request.

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## Bridges the gap between efficacy and tolerance

**THERAPEUTIC CLASSIFICATION:** Anti-inflammatory agent with analgesic properties.

**INDICATIONS:** Treatment of rheumatoid arthritis, ankylosing spondylitis and osteoarthritis.

**CONTRAINDICATIONS:** Active peptic ulcers or active inflammatory diseases of the gastrointestinal tract; suppositories should not be used in patients with any inflammatory lesions of rectum or anus, or a recent history of rectal or anal bleeding.

Hypersensitivity to the drug. Because of the existence of cross sensitivity, Orudis should not be given to patients in whom acetylsalicylic acid and other non-steroidal anti-inflammatory drugs induce symptoms of asthma, rhinitis or urticaria.

**WARNINGS: In pregnancy** — Safety in pregnant or nursing women has not been determined and therefore use is not recommended. Pregnant rats who received ketoprofen 6 and 9 mg/kg/day p.o. from day 15 of gestation, showed dystocia and increased pup mortality. **In children** — The conditions for safe and effective use in children under 12 years of age have not been established and the drug is therefore not recommended in this age group.

**PRECAUTIONS:** Use with caution in patients with a history of gastrointestinal inflammatory disorders or ulceration. Both capsules and suppositories can cause upper gastrointestinal toxicity, including hemorrhage.

Suppositories should be given with caution to patients with any rectal or anal pathology.

The drug should be given under close medical supervision in patients with impaired liver or kidney functions.

Orudis may mask signs of infectious diseases. This should be kept in mind so that any delay in diagnosing and treating infection may be avoided.

**Use in patients taking oral anticoagulants:** Orudis has been shown to depress platelet aggregation in animals. However, in twenty patients undergoing therapy with coumarin, Orudis failed to demonstrate potentiation of anticoagulant effect. Nevertheless, caution is recommended when Orudis is given concomitantly with anticoagulants.

The presence of Orudis and its metabolites in urine has been shown to interfere with certain tests which are used to detect albumin, bile salts, 17-ketosteroids or 17-hydroxycorticosteroids in urine and which rely upon acid precipitation as an end point or upon color reactions of carbonyl groups. No interference was seen in the tests for proteinuria using Albusix, Hema-Combistix or Labstix Reagent Strips.

**ADVERSE REACTIONS: Gastrointestinal:** they were the most frequently observed and were seen in approximately 22% of patients. Ulceration and gastrointestinal bleeding have been noted in a few patients (approximately 0.8%). Other adverse reactions in order of decreasing frequency were: gastrointestinal pain, nausea, constipation, vomiting, dyspepsia and flatulence, diarrhea, anorexia and bad taste in

mouth. Rectal administration was associated with a lower incidence of upper gastrointestinal reactions (12%) with the exception of ulceration, the incidence of which was the same. However anorectal reactions presenting as local pain, burning, pruritus, tenesmus and rare instances of rectal bleeding occurred in 16.5% of subjects. 5% of patients discontinued rectal therapy because of these local reactions. **Central Nervous System:** headache, fatigue, dizziness, tension, anxiety, depression and drowsiness. **Skin:** rashes, pruritus, flushing, excessive perspiration and loss of hair. **Allergic:** urticaria, angioedema and asthma. **Cardiovascular:** mild peripheral edema, palpitation and bruising. **Auditory system:** tinnitus. **Mouth:** ulcers, sore tongue, inflammation of the mouth and gums.

**Laboratory Tests:** Abnormal alkaline phosphatase, lactic dehydrogenase, glutamic oxaloacetic transaminase and blood urea nitrogen values were found in some patients receiving Orudis therapy. The abnormalities did not lead to discontinuation of treatment and, in some cases, returned to normal while the drug was continued. There have been sporadic reports of decreased hematocrit and hemoglobin values without progressive deterioration on prolonged administration of the drug.

**SYMPTOMS AND TREATMENT OF OVER-DOSAGE: Symptoms:** At this time, no overdosage has been reported. **Treatment:** Administer gastric lavage or an emetic and treat symptomatically: compensate for dehydration, monitor urinary excretion and correct acidosis if present.

**DOSAGE AND ADMINISTRATION: Adults: Oral:** The usual dosage is 150 to 200 mg per day in 3 or 4 divided doses. **Rectal:** Orudis suppositories offer an alternative route of administration for those patients who prefer it. Administer one suppository morning and evening or one suppository at bedtime supplemented as needed by divided oral doses. The total daily dose of Orudis (capsules and suppositories) should not exceed 200 mg.

When the patient's response warrants it, the dose may be decreased to the minimum effective level. In severe cases, during a flare-up of rheumatic activity or if a satisfactory response cannot be obtained with the lower dose, a daily dosage in excess of 200 mg may be used. However, a dose of 300 mg per day should not be exceeded.

**Children:** Orudis is not indicated in children under 12 years of age because clinical experience in this group of patients is insufficient.

**Availability:** Capsules of 50 mg, bottles of 100 and 500. Suppositories of 100 mg, boxes of 30. Store below 30°C.

Product information as of Nov. 11, 1979.

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findings differ from theirs in two respects. In their studies the minimum inhibitory concentrations of trimethoprim were much greater and trimethoprim resistances were readily transferred to *E. coli* K 12.

As Taylor and associates<sup>2</sup> suggested, we need to be aware of the possibility of encountering trimethoprim-resistant shigellae and, when indicated, be prepared to adjust therapy appropriately.

MARGARET FINLAYSON, PH D

Research bacteriologist

Provincial Laboratory of Public Health

University of Alberta

Edmonton, Alta.

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### The Cairbed v. British airbed

*To the editor:* In her article on the Cairbed Anne Gilmore suggested that the British airbed (Low Air Loss Bed System, Mediscus Products Ltd.) is not designed for the control of bacteria (*Can Med Assoc J* 120: 1172, 1979). On the contrary, its cushions, or air sacs, are designed with a micromesh feature that allows the atomic particles of perspiration to be carried away but allows no bacteria through. Ms. Gilmore infers that the Cairbed does not need cleaning, not even between patients, since virtually no bacteria exist.

The problem of incontinent patients being nursed on the British airbed has been of deep concern to us; we have produced a drawsheet made of the air sac material to counteract this. The amount of airflow into the bed is based on the maximum average weight of the patient. The lower the airflow and the lower the pressure, the less weight can be supported. The picture in Ms. Gilmore's article is captioned: "Canada's airbed: more advanced than the British version". The British airbed is inflated by a control console that can be in the