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TREATMENT OF URINARY TRACT INFECTIONS

To the Editor:

I read with interest the article from Duke University, "Treatment of Lower Urinary Tract Infections with Single-Dose Trimethoprim-Sulfamethoxazole,"¹ which concluded that single-dose therapy is as effective as ten-day therapy. A recently published study from the Mayo Clinic² contradicts this finding. In the Mayo Clinic study relapses (persistent bacteriuria or recurrent infection with the same organism) occurred in 10 of 68 women treated with a single dose of trimethoprim-sulfamethoxazole (TMP-SMX), while only 2 of 68 who were treated with a traditional ten-day course of the same drug relapsed. In fact, close examination of the data from the Duke study also shows this increased rate of relapse; 5 of 111 patients treated with single-dose therapy relapsed while only 1 of 92 patients treated with a ten-day course did so. This higher rate of relapse in patients who receive a single dose of medication remains one of the major issues in the treatment of urinary tract infections.

In addition to this difference in relapse rates, we do not yet know the natural history of relapses after single-dose therapy. In another recent study³ 1 of 13 patients treated with a single dose of TMP-SMX developed signs of pyelonephritis and a positive test for antibody-coated bacteria, thought to be indicative of upper urinary tract infection. Such an occurrence is especially worrisome because many practicing physicians, including

myself, do not routinely perform follow-up cultures on patients with uncomplicated urinary tract infections.

Physicians must balance the advantages of single-dose therapy, such as fewer pills and a lower incidence of side-effects, against the disadvantages including a higher incidence of recurrences and the possible need for closer follow-up. Single-dose therapy may be preferable for selected patients. Until a much larger body of clinical experience is accumulated, however, it cannot be recommended as the treatment of choice for the general population.

James Dunlay, MD
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3. Hooton TM, Running K, Stamm WE: Single-dose therapy for cystitis in women. A comparison of trimethoprim-sulfamethoxazole, amoxicillin and cyclacillin. *JAMA* 1985; 253:387-390

The preceding letter was referred to Mr. Hanlon, who responds as follows:

We appreciate the opportunity to further comment on our study results. We recognize that it is difficult for practitioners to determine the significance of clinical study findings, especially when there has been an abundance of published

material in a particular topic area. It is to be expected that one will find conflicting study results. This requires that practitioners weigh the balance of the evidence that is available and decide whether isolated or conflicting results are clinically important.

Dr. Dunlay raises some interesting points regarding potential disadvantages to treating uncomplicated cystitis in women with single-dose trimethoprim-sulfamethoxazole (TMP-SMX). First, our study found neither statistically nor clinically significant differences in the relapse or reinfection rates between the single-dose group and the ten-day group.¹ The Mayo Clinic report is the only study that found significantly higher relapse rates with single-dose TMP-SMX.² One might speculate that this conflicting finding may be due to differences in their study population and methodology. A body of literature, however, suggests that relapse rates with single-dose TMP-SMX are not significantly higher.³⁻⁷

Second, none of the patients in our study who had relapses went on to develop pyelonephritis. Only one patient has been reported to develop pyelonephritis after single-dose TMP-SMX, and this was 19 days after therapy with two negative urine cultures at three and 14 days after treatment.⁸ Most experts believe that the probability of pyelonephritis occurring after failure with single-dose therapy is extremely low.^{9,10}

We believe that the balance of evidence^{1,3-7,9-12} supports our find-

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2. The orphenadrine component is indicated as an adjunct to rest, physical therapy, and other measures for the relief of discomfort associated with acute painful musculo-skeletal conditions.

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Contraindications:

Because of the mild anticholinergic effect of orphenadrine, Norgesic or Norgesic Forte should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic or Norgesic Forte is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin or caffeine.

The drug is contraindicated in patients who have demonstrated a previous hypersensitivity to the drug.

Warnings:

Norgesic Forte may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; ambulatory patients should therefore be cautioned accordingly.

Aspirin should be used with extreme caution in the presence of peptic ulcers and coagulation abnormalities.

Usage in Pregnancy:

Since safety of the use of this preparation in pregnancy, during lactation, or in the childbearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

Usage in Children:

The safe and effective use of this drug in children has not been established. Usage of this drug in children under 12 years of age is not recommended.

Precautions:

Confusion, anxiety and tremors have been reported in few patients receiving propoxyphene and orphenadrine concomitantly. As these symptoms may be simply due to an additive effect, reduction of dosage and/or discontinuation of one or both agents is recommended in such cases.

Safety of continuous long term therapy with Norgesic Forte has not been established; therefore, if Norgesic Forte is prescribed for prolonged use, periodic monitoring of blood, urine and liver function values is recommended.

Adverse Reactions:

Side effects of Norgesic or Norgesic Forte are those seen with aspirin and caffeine or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. Rare G.I. hemorrhage due to aspirin content may be associated with the administration of Norgesic or Norgesic Forte. Some patients may experience transient episodes of light-headedness, dizziness or syncope.

Caution:

Federal law prohibits dispensing without prescription. NG-7

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ings that the single-dose treatment with TMP-SMX in women with uncomplicated cystitis is effective and offers a number of advantages.

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BIG BUSINESS AND THE PHYSICIAN-PATIENT RELATIONSHIP*

To the Editor:

The forces of change have placed the future of American medicine in the hands of politicians and big business. The "pop" phrase today is "cost containment." The noble scramble for cost containment may leave two vital components of the physician-patient relationship in the dust: The physician and the patient.

In the deepest sense, the physician-patient relationship is a mutually dependent relationship. Physicians and nobody else are entrusted with the patient's well-being—the care of the patient. For the most part, we do care. No third party computer profile of our patients of care can ever demonstrate the care and compassion we give our patients while reasoning with updated knowledge through their health problems.

Let us communicate this simple message to our patients by continued good example and by further public education that we and nobody else can do it better. No government agency, no health care coalition, no for-profit health care giant can safeguard the patient's well-being as we can.

The physician-patient relationship is too important to be left in the hands of big business. We must insist that medicine is not and never will be exclusively big business.

*Richard J. Tushla, MD
Santa Paula, California*

*Excerpts from the president's address to Ventura County Medical Society, November 1984

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LETTERS TO THE EDITOR

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MECONIUM ASPIRATION

To the Editor:

As other perinatal complications have become amenable to prevention, meconium aspiration syndrome (MAS) has come to represent a significant problem in perinatal medicine. Present techniques in the delivery room can also relegate MAS to a complication of the past.

Meconium-stained amniotic fluid occurs in anywhere from 8 to 22 percent of vertex deliveries. Thick stained fluid has a worse prognosis for the infant than thin and indicates hypoxia.¹

A study at the University of California in 1974 revealed that in 80 infants with meconium-stained fluid who had their airways aspirated, 46 had anywhere from 0.5 to 7.5 cc of fluid in their airways. Fifteen of these had thick fluid in the airway, and 62 had meconium in the stomach. Of the 80, 23 had abnormal findings on chest x-ray examination, and 16 required some sort of treatment. Of the 16, seven had either a pneumothorax or pneumomediastinum.²

In 1975 at the University of Colorado a combined obstetrics-pediatrics approach was begun. During the period between 1970 and 1974, with bulb suctioning, five deaths were due to MAS in 19 patients. After using the combined approach and DeLee suctioning with a DeLee suction apparatus, MAS occurred in seven patients, but no deaths. Deep suctioning and direct visualization of the cords resulted in one patient with MAS and no deaths. The recommendation of this study was deep suctioning before the infant breathed and direct visualization of the vocal cords. If no meconium was found on the cords, do no further suctioning; if meconium, do tracheal lavage.³

Failure of deep suctioning below the cords to prevent MAS is probably due to aspiration of fluid in

utero. In most cases MAS is an acute predetermined event. In others, MAS may develop in a more chronic form with actual intrauterine pneumonitis, a condition documented by a study of 200 stillborns in New York.⁴ Twenty-five infants had amniotic fluid in their alveoli and eight had evidence of meconium contamination. Four cases of significant intrauterine pneumonitis also occurred.

The bulb suction cannot give the deep suctioning required to prevent MAS. One must use a DeLee suction apparatus. The infant should be suctioned once the head has been delivered and before delivery of the shoulders. The proper technique is to suction the mouth and then the nares. After delivery of the infant, further suctioning of the oropharynx and stomach should be done. Further suctioning in the meconium-stained infant should be done under direct vision of the larynx. All delivery tables should have a DeLee suction apparatus on them and should be used at each delivery. The bulb suction should be reserved only for suction of thick mucous. This approach should prevent the majority of the meconium aspiration syndromes.

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Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, self-care, apparent motivation) in patients over sixty. It appears that individuals who respond to HYDERGINE therapy are those who would be considered clinically to suffer from some ill-defined process related to aging or to have some underlying dementing condition, such as primary progressive dementia, Alzheimer's dementia, senile onset, or multi-infarct dementia. Before prescribing HYDERGINE[®] (ergoloid mesylates), the physician should exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis regardless of etiology (see Contraindications).

Use of HYDERGINE therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and overall impression of clinical status.

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