

Chronic Invalidism in a Young Woman: A Study of Family Dynamics

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DR. HERBERT L. TINDALL
(Associate Director, Family Practice Residency Program): Today's case illustrates some of the devastating effects of chronic invalidism upon family dynamics. The main character in our drama is a 33-year-old housewife and mother. The stage will be set by Dr. William Shoemaker, whose perception and persistence led to the unraveling of a somewhat baffling problem.

DR. WILLIAM SHOEMAKER
(third-year family practice resident): I first became acquainted with our index patient when she accompanied her mother to the Family Practice Center. The story, therefore, must begin in February 1975, when the patient's mother, a 55-year-old white woman, presented to the Center with multiple complaints including chest pain, hot flashes, and an itching vaginal discharge. Accompanying the chest pain at times was abdominal pain, back pain, and shortness of breath. Her last menstrual period was four years previously. She took hormones for about one year, but stopped one year prior to this consultation. She stated that she had been very depressed and withdrawn in the past several months and experienced severe

anxiety. She had a problem getting to sleep, and she awakened many times during the night. She related a series of misfortunes in the past year. Her husband ran away. Her daughter, our index patient, is incapacitated by severe kidney disease and depression. Two grandchildren, the children of the invalid daughter, were sexually molested. She said that she had lost interest in life, and frequently felt worthless and hopeless.

A complete physical examination was essentially normal with the exception of senile vaginal changes with a thin, atrophic vaginal mucosa. The discharge appeared to be normal. The urinalysis was normal and the smear of the vaginal discharge did not reveal any pathogens.

The diagnosis was depression and

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menopausal syndrome. She was started on an antidepressant and on cyclical estrogen therapy.

In January 1976, 11 months after her first visit to the Center, the mother was admitted for one week to the Lancaster General Hospital with an acute pyloric channel ulcer, anxiety, and depression. Noted in the hospital record was a long history of "bad nerves." She also stated that she had frequent bladder and kidney infections, and that one daughter has polycystic kidneys. On February 9, she reported to the Center for a post-hospital check for her ulcer disease. She appeared less tense than previously and stated that she had improved, had little pain, and was taking her medications regularly.

At this time, I had a long discussion with her regarding her daughter's disease and its effect upon the family. It seems that all family members related to the daughter as an invalid who was bedridden, and terminally ill with renal disease. She had become a very passive, dependent person and was accustomed to staying in bed for long periods of time and being waited upon by her husband and by her mother. Both her husband and her mother had wanted her to see a nephrologist, but she had been content to stay with the general physician who had been treating her.

The daughter was seen at the Family Practice Center for the first time in February 1976, a year after her mother's first visit. She was an overweight 33-year-old white woman, height 62½ inches, weight 193¼ pounds. Blood pressure was 134/90. She said that she had chronic nephritis and polycystic kidneys. Recent medical care had been by her general physician. Two weeks previously she had been told that she had a kidney infection, and was now taking nitrofurantoin (Macrodantin), as well as an analgesic (Percodan). She had pain in the left flank with heavy aching in this area. She complained of some burning on urination, which was intermittent.

She stated that she had been studied for this kidney problem at two Philadelphia medical centers and two community hospitals in this area. She understood that the right kidney was not working, and that the left kidney had minimal function. She complained of 2x nocturia.

Examination by the physician who saw her at that time revealed left costovertebral angle tenderness with large, palpable kidneys bilaterally, both of which were tender. His impression was polycystic kidney disease, and he was also concerned about possible drug dependence. He switched temporarily to another analgesic. He postponed an immediate renal consultation because the renologist was on vacation, but planned to have the renologist's alternate see her the next day if the pain persisted. At the time of this visit the urinalysis was normal.

Two weeks later, I received a phone call that the patient was having pain, ankle and face swelling, and tiredness. By now, she had decided that she would like to see a renologist. I set up an appointment for Dr. Schubert to see her in his office a week later. I was suspicious from her history that her symptoms might be due to renal failure. However, two days later, the patient's husband called an ambulance because she was having severe pain, and she was taken to the Lancaster General Hospital and admitted. The impression of the examining physician in the Emergency Room was that she had left flank pain and colic probably due to bleeding into a polycystic kidney, or possibly from pyelonephritis. She was admitted to the service of Dr. John Schubert, whom we will ask to comment on his initial evaluation of this patient.

DR. JOHN SCHUBERT (*Renologist*): I found the history to be inconsistent and wondered if it might not be partly fictitious. Frankly, my initial concern was to exclude drug addiction. Her pain was in the correct distribution for renal colic radiating around to the groin, but each pain only lasted a second. Her history was one of multiple admissions, to a number of hospitals, for treatment of urinary tract infections in a patient with a "large, cystic left kidney and a nonfunctioning right kidney." Physical examination was negative except for some subjective tenderness over the left side of the abdomen. No enlarged kidney or mass was palpable. The diagnosis of polycystic kidneys or renal failure therefore seemed doubtful. An intravenous pyelogram was ordered, and old records were requested. The intravenous pyelogram was performed on March 2, 1976, and Dr. Hoke will discuss those films.

DR. HUGH H. HOKE, JR. (*Radiologist*): A preliminary scout film of the abdomen demonstrates a right renal shadow that measures only 4 to 5 cm in length. Following the infusion, the contrast serial films were obtained. There is an equal appearance of the contrast, bilaterally. The right kidney is small and deformed with deformed calyces and significant loss in cortex. The kidney measures 2 x 4 cm in greatest diameter. The left kidney is of normal size; however, the contour is unusual. There is loss of cortex in the medial aspect of the upper pole. The calyces are all blunted. There is either a large scar or post-surgical change involving the inferior half of the left kidney laterally. No evidence of polycystic disease is present. The changes are most consistent with an atrophic right kidney, secondary to chronic pyelonephritis. There are also changes of chronic pyelonephritis involving the left kidney, however, not to the same extent. There is no evidence of obstruction. The bladder is normal. My impression is that there is an atrophic pyelonephritic right kidney and changes of pyelonephritis in the left kidney. Even though this patient's history is one of polycystic disease there is no evidence of this disorder on these films.

DR. SCHUBERT: The right kidney looks like a miniature, normal kidney to me, and I believe it represents a congenital hypotrophic kidney. There is definitely scarring in the left kidney which probably represents damage from old infections. She has at least 50 percent of normal function. I strongly advised her that her pain was not coming from her kidneys, that she did not have end-stage renal disease, and that there was no reason for her to be incapacitated by her old kidney problem. The next day she complained of a heavy band of pain around the waist, as well as left lower quadrant and suprapubic pain. On examination there was some left lower quadrant tenderness with guarding. However, she also complained when I pinched her skin lightly in various parts of her body. In conclusion, I felt her symptoms were primarily psychoneurotic in origin.

DR. SHOEMAKER: The creatinine clearance proved to be 75 ml per minute. The urine culture was negative; however, the patient was taking Macrodantin. A test for porphyria was

negative.

In the meantime, a copy of the summary from the University of Pennsylvania was received. The report, from 1962, described the kidney situation much as it is at the present; thus, there had been no significant change in the renal findings in 14 years. The patient was so advised. This information obviously came as quite a shock to a person who had been told she was dying from kidney disease. I think that she does understand and has accepted the possibility that she is not mortally ill. At this time she was discharged from the hospital on 2 mg of trifluoperazine (Stelazine) b.i.d., and advised to begin an exercise program and increase her activity.

Following the patient's discharge from the hospital, her mother came into the office. She had many different problems relating to her daughter and herself, and we had a 90-minute discussion about these. Since receiving the information that the daughter is basically not sick, all the family structures have been severely stressed and everyone is quite shaken and upset. The daughter accompanied the mother to the Center at this time. The daughter had increased her activity at home, as Dr. Schubert had told her to do. She was trying to avoid dwelling upon her problems. Her husband, having become used to relating to her as an invalid, had become quite upset and still felt that she should be acting like a terminally-ill patient. Her mother stated that she now felt "useless" and the patient had decided that she "would not need to see any doctors now." However, another circumstance came to the rescue, at least temporarily. The patient's grandmother had become sick in Pittsburgh and the mother was planning to go out there the following week and take care of her sick mother.

On March 17, the patient returned for a post-hospital patient check. She still had back pain. At this time she showed me a slip of paper given to her at one of the Philadelphia medical centers in 1972, in which a physician had stated that she had a "herniated lumbar disc." At this point, I reoriented my thinking, and listened to her new story. The history was classic for a ruptured disc, as was the physical examination. She had fallen while pregnant in 1969. She did not have pain from 1969 to 1972, but has had

chronic pain ever since. The pain is in the low back and hurts when she coughs or sneezes. The pain radiates down the left leg to the left knee, and there has been some weakness in the left leg. On examination, straight leg raising was positive on the left at 70 degrees. It was negative on the right. There was an absent left ankle jerk and a slight response on the right. Knee jerks were positive (1+) and biceps (3+) and equal bilaterally. There was some problem with heel walking and toe walking. Babinskis were absent. The patient was placed on Zactirin Compound for pain, and a neurosurgical consultation was requested. She was seen by Dr. Argires on March 30th.

DR. JAMES ARGIRES (*Neurosurgeon*): The patient told me that for many years she has had repeated episodes of back pain and that she has polycystic kidneys for which Dr. Schubert has been treating her. Apparently the significance of her renal studies, disproving polycystic kidney disease, had not completely penetrated her thinking. Chronic back pain has been associated with bilateral leg distribution, more specifically on the left and along the L-5 dermatome level. The pain is accentuated and aggravated by physical activity. Lumbar spine x-rays done at another hospital are not available, but there is some question of apophyseal sclerosis, as well as early degenerative disc disease. There is no bladder or bowel disturbance, and no other joint complaint. Efforts to correct her obesity have been unsuccessful. Her prolonged bedrest which was occasioned by her supposed kidney problem did not cause any marked regression in her back symptoms. Physical examination was essentially negative except for the neurological findings which revealed absent bilateral Achilles reflexes and some straight leg raising restriction on the left. There was paraspinal tightness and tenderness and some straightening of her lordotic curve. There was no motor or sensory deficit and there were good peripheral pulses. My impression was that she had lumbar degenerative disc disease, and I suggested admitting her to the hospital for a lumbar myelogram and further decision as to treatment.

DR. SHOEMAKER: The patient was subsequently readmitted to the Lancaster General Hospital on March

31; and a lumbar myelogram showed an acute herniated lumbar disc at the L-4-5 level on the left. She was scheduled for surgery.

It is interesting to note that immediately preoperatively, the husband took me aside and asked if I thought she could withstand the operation since she had *such bad kidney disease!*

Postoperatively, she made a slow progressive recovery, though she still complained of considerable pain. She was discharged on April 15 on 25 mg of chlordiazepoxide hydrochloride (Librium) q.i.d., and Percodan for pain.

On outpatient follow-up, the patient and family are improving satisfactorily. The patient is now motivated for weight loss, and her affect and mood are quite good. Her husband seems satisfied and is becoming adjusted to relating to his wife as a non-invalid. The patient is using Librium and propoxyphene napsylate with acetaminophen (Darvocet) only, with no narcotic medication. Her mother is kept busy and useful in Pittsburgh taking care of her ill mother.

DR. TINDALL: This case is an excellent example of how invalidism of one member of the family can severely affect family dynamics. Dr. Shoemaker is to be congratulated for his excellent work in taking an overall view of this family and in constructively influencing the lives of the immediate family members. Without the family medicine approach, the individual members of this family would probably have gone on for many years seeking fragmented care and acting upon incompletely informed advice. Only when one stood back and took an overall view of the dynamics of this family, was it possible to fit the parts of the puzzle together and to begin to disperse the pathologic mechanisms which were leading all of the family members to disaster. It would appear that Dr. Shoemaker still needs to guide this family through a period of adjustment to their newfound situation. It will be interesting to follow this family and see if new problems crop up to take the place of some which have been solved. In addition, we must remember that the patient does have significant kidney disease, and that some of the problems which have been dispelled at this time may well have to be faced in the future.

This section of the journal is designed to present clinical problems which focus on patient management, problem-solving, and other elements integral to family medicine. It features reinforcement of major teaching points through further discussion and supplemental references which appear on the following pages.

Self-Assessment in Family Practice

These materials have been prepared by members of the Self-Assessment Panel of *The Journal of Family Practice*. Membership: R. Neil Chisholm, MD, Chairman (University of Colorado, Denver), B. Lewis Barnett, MD (Medical University of South Carolina, Charleston), Leland B. Blanchard, MD (San Jose, California), Paul C. Brucker, MD (Thomas Jefferson University Hospital, Philadelphia, Pennsylvania), Laurel G. Case, MD (University of Oregon Medical School, Portland), Silas W. Grant, MD (University of Alabama, Huntsville), Ian R. Hill, MD (Plains Health Centre, Regina, Saskatchewan), Kenneth F. Kessell, MD (MacNeal Memorial Hospital, Berwyn, Illinois), Edward J. Kowalewski, MD (University of Maryland, Baltimore), John A. Lincoln, MD (University of Washington, Seattle), James G. Price, MD (Brush, Colorado), Richard C. Reynolds, MD (University of Florida, Gainesville), Gabriel Smilkstein, MD (University of California, Davis), William L. Stewart, MD (Southern Illinois University, Springfield).

The following is a patient management problem. For each question, one or more answers may be correct.

Mrs. W.H. comes in for a routine antenatal check at four months. This 21-year-old, rather immature person suddenly confides that although she is looking forward to having the baby, she is worried that her husband will not find her desirable if she breast-feeds the infant. She quotes stories of friends who have suffered painful breasts and babies not having adequate amounts of milk from breast-feeding, and has altogether a negative outlook on nursing her expected child.

1. At this visit, you:

- A. Tell the young woman not to worry about her anxieties as she has a long time yet to think about things.
- B. Inform her that despite her sources of information, 85 percent of women are capable of breast-feeding for six months or longer.
- C. Suggest that she discuss her fears with her husband.
- D. Promise to suppress lactation after delivery.
- E. Give her some information pamphlets on the subject, and promise to see her in four weeks and discuss the issue further at that time.

In two weeks, Mrs. W.H. is more open in her approach and informs you that her husband thinks that a woman breast-feeding her child is very beautiful, and that her attitude is more positive. Her pregnancy is progressing normally. She asks you what are the advantages to having a baby who breast feeds over artificial feeding.

2. You reply:

- A. None.
- B. Incidence of allergies, eczema, colic, and metabolic anomalies are lower in breast-feeding.
- C. Certain protective properties are transmitted in the milk.
- D. Breast-feeding facilitates adequate development of the peribuccal muscles and dental arch so as to prevent protrusion of the teeth.
- E. Breast-feeding helps the uterus to return to normal more quickly.
- F. She will not conceive while breast-feeding.
- G. Early and close bonding of the mother-infant relationship is achieved by breast-feeding.
- H. It is cheaper.

Now that she is considering the possibility of breast-feeding, the mother is concerned that her breasts will be too small.

3. You take this chance to offer her the following information:

- A. Breast size initially is irrelevant to successful feeding.
- B. Breast size will increase and a supporting bra is essential at this time.
- C. She should wash her breasts several times a day with soap and water to "firm them up."
- D. She should avoid the use of soaps but should use plain water and dry carefully.
- E. Moisturizing cream or baby oil should be used to keep the nipples and areolas flexible.

4. After the delivery of a seven-pound baby boy, the following regimen would be suitable:

- A. 1st day - three minutes to a side, four-hourly.
 - B. 2nd day - five minutes to a side, four-hourly.
 - C. 3rd day - 10 minutes to a side, four-hourly.
 - D. 1st day - five minutes to a side, every three hours.
 - E. 2nd day - 10 minutes to a side, every three hours.
 - F. 3rd day - 15 minutes to a side, every three hours.
- Total time should not exceed:

- G. 10 minutes
- H. 20 minutes
- I. 30 minutes

The mother is discharged routinely on the fourth day and advised to maintain a not more often than three-hourly regimen. After two days, you receive a call from an agitated mother saying the baby cries all the time and that she is uncomfortable. You ask her to come to the office just before a feeding time and say that you will test weigh the baby. She is surprised at this visit to find that the baby is taking 4 1/2 oz. You explain the importance of starting the feeding with the breast used to finish the last time.

5. You reassure her that it takes most mothers:

- A. Four to six weeks to become accustomed to breast-feeding.
- B. Two weeks to become accustomed to breast-feeding.
- C. Some mothers just cannot feed their infants.

With continued supportive therapy, the mother develops a good regimen and successfully feeds her infant until eight weeks post partum when she appears at the office with a swollen, hot, tender, right breast.

6. The treatment would be:

- A. Stop feeding.
- B. Compresses.
- C. Cold soaks.
- D. Antibiotics.
- E. Analgesics.
- F. Nurse twice as often for a shorter time from the affected breast.

After one week, the inflammation has subsided and gradually the mother resumes normal feeding. As the baby reaches five months of age, the mother asks you about weaning.

7. You tell her:

- A. To bind her breasts, cut back on the fluid, and stop.
- B. Weaning should last three weeks to prevent engorgement of the breasts.
- C. To wear a good supporting bra night and day.
- D. To cut down by one feeding at a time.

Answers and Discussion

- 1. B, C, and E.
- 2. B. There is a definite increased risk of allergy with the introduction of cow's milk in the early months of life. Atopic dermatitis is more common in areas where bottle-feeding is the norm. There is less hypocalcemia, obesity, and hypernatremic dehydration in breast-fed babies.
C. Anti-infective agents present in the milk (ie, secretory IgA, lactotoxin, and lysozymes) act directly against organisms most likely to invade the gut and for which the neonate has little transplacental immunity (eg, enterovirus, E. coli).¹
- 3. A, B, D, and E.
- 4. D, E, F, and I.²
- 5. A.
- 6. B, D, E, and F.
- 7. B, C, and D.

References

- 1. Jelliffe DB, Jelliffe EFP: Nutrition and human milk. *Postgrad Med* 60(1):153-156, 1976
- 2. Applebaum RM: The modern management of successful breast-feeding. *Pediatr Clin North Am* 17:203-225, 1970

Vendor Background

1. How large is the firm in terms of sales, number of offices, and number of employees?
2. What percentage of sales is derived from physician computer data processing services?
3. How many years have they served physicians?
4. How many physicians are currently using their services? Obtain a geographical distribution of physician users.
5. Will they provide a list of physicians in your state, county, or city who are presently using their services?
6. Have they been successful? Review a copy of the firm's latest balance sheet and income statement.
7. Do they have sufficient liquid assets (cash, marketable securities, etc) to modify existing programs when necessary and to develop new medical applications?
8. During the visit to vendor offices, assess the quality of management, condition of offices and operating "tone" at the computer center. Does the staff appear organized and confident?
9. How many employees do they have who are available to serve you? Determine the number and assess the quality of personnel.
10. Does the service contract have any provisions which bother you or are not clear? If so, have the vendor reword it or change it to suit your particular needs. (You may have your lawyer review the contract as a precautionary move.)
11. Are the vendor's responsibilities in the contract specific enough in case of unforeseen problems? (Your lawyer should review the contract as a precautionary move.)
12. Ask an executive at the vendor's office (not a salesman) what the three major defects or problems are in his system and what the firm is doing to correct them.

Conversion

13. What is the vendor's manpower

commitment to conversion?

14. Does the conversion procedure seem planned and orderly in light of your personnel and office space considerations?
15. Does your office staff have any responsibilities for the conversion?
16. Do they impose a new numbering (filing) system which your office aides must get used to?
17. How long does conversion take? Review their conversion plan.
18. Are the patient accounts aged for entry into the computer system or is only the current balance picked up?
19. Are the present system and the proposed computer system operated side by side for awhile during the period when the "bugs" are being eliminated from the new system? If so, is there any charge for the computer service during this period?
20. How are the office aides (and physicians, if interested) trained to use the vendor's computer data processing system?
21. Does the vendor provide a comprehensive operating manual?
22. Is the operating manual easily understandable and written in English (or French or Spanish) as opposed to *computerese* and *engineereese*? Test readability by letting your spouse read it.
23. Does the vendor provide any assistance in teaching the system to personnel hired after the conversion?
24. What does your office staff think about the conversion process?
25. Ask an executive at the vendor's office (not a salesman) what the three major conversion problems are.

Input

26. Is the input procedure understood by the office aides?
27. Is the input procedure acceptable to the office aides who must interface with it daily?
28. Are special input documents designed specifically for family practice?
29. Is there a multiplicity of input documents or are there a few, easily understood forms?

Continued on page 167

SINGLET®

Decongestant-Anti-histamine-Analgesic

DESCRIPTION: Singlet is a long-acting, pink, capsule-shaped tablet monogrammed with the Dow Diamond and 103 for positive identification. Each Singlet contains phenylephrine hydrochloride, 40 mg., chlorpheniramine maleate, 8 mg. and acetaminophen, 500 mg.

ACTIONS: The sustained vasoconstrictor action of phenylephrine hydrochloride provides a decongestant effect on mucous membranes of the respiratory system, thus helping clear obstructed respiratory passages and promote drainage.

The antihistaminic action of chlorpheniramine prevents released histamine from dilating capillaries which may cause edema of the respiratory mucosa. Chlorpheniramine is one of the most effective and least toxic of the histamine antagonists.

Acetaminophen relieves pain and fever until normal drainage brings physiologic relief. The analgesic-antipyretic effect of acetaminophen is comparable to that of aspirin, but acetaminophen has the added advantage of causing less gastrointestinal irritation. Also, it can usually be taken by persons who are sensitive to salicylates.

INDICATIONS: The ingredients in Singlet provide symptomatic treatment of colds, sinusitis, allergic rhinitis, and influenza complicated by respiratory congestion, rhinorrhea, fever, headache, myalgia and other painful states.

CONTRAINDICATIONS: Hypersensitivity to any of the formula ingredients. Sympathomimetic amines are contraindicated in patients with severe hypertension, severe coronary artery disease, hyperthyroidism, in patients on MAO inhibitor therapy, and in nursing mothers.

PRECAUTIONS: If used in individuals with glaucoma, hypertension, diabetes mellitus or urinary retention, judicious caution must be exercised. See, however, Contraindications. The antihistaminic agent may cause drowsiness and ambulatory patients who operate machinery or motor vehicles should be cautioned accordingly.

DOSAGE AND ADMINISTRATION: Adults, one tablet three times daily. In severe cases, a fourth dose may be indicated. The interval between doses should not be less than six hours. Note: This product is specifically formulated to provide therapeutic effect up to 8 hours. Do not break or crush the tablets.

OVERDOSAGE: Acetaminophen in massive overdosage may cause liver damage and hepatic failure.

CAUTION: Federal law prohibits dispensing without prescription.

HOW SUPPLIED: In bottles of 100 tablets (NDC 0183-0103-02).



DOW PHARMACEUTICALS
The Dow Chemical Company
Indianapolis, IN 46268

Brief Summary of Prescribing Information

INDICATIONS

Sulfacytine is indicated for the treatment of acute urinary tract infections only (primarily pyelonephritis, pyelitis, and cystitis), in the absence of obstructive uropathy or foreign bodies, when due to susceptible strains of the following microorganisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and *Proteus vulgaris*.

Important Note: *In vitro* sulfonamide sensitivity tests are not always reliable. The test must be carefully coordinated with bacteriologic and clinical response. When the patient is already taking sulfonamides, follow-up cultures should have aminobenzoic acid added to the culture media.

Currently, the increasing frequency of resistant microorganisms is a limitation of the usefulness of antibacterial agents including the sulfonamides.

CONTRAINDICATIONS

Hypersensitivity to sulfonamides. Infants less than 2 months of age. Pregnancy at term and during the nursing period because sulfonamides cross the placenta and are excreted in breast milk and may cause kernicterus.

WARNINGS

Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia, and other blood dyscrasias. The presence of clinical signs, such as sore throat, fever, pallor, purpura, or jaundice, may be early indications of serious blood disorders.

Complete blood counts should be done frequently in patients receiving sulfonamides.

The frequency of renal complications is considerably lower in patients receiving the more soluble sulfonamides. Urinalysis with careful microscopic examination should be performed frequently for patients receiving sulfonamides.

Due to lack of clinical experience with sulfacytine in the pediatric age group, it is not recommended for use in children under age 14.

PRECAUTIONS

Sulfonamides should be given with caution to patients with impaired renal or hepatic function and to those with severe allergies or bronchial asthma.

Adequate fluid intake must be maintained in order to prevent crystalluria and formation of calculi.

In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related.

Usage in Pregnancy: Reproduction studies have been performed in rats and rabbits and have revealed no evidence of impaired fertility or harm to the fetus due to sulfacytine. There are no well-controlled studies in pregnant women. Therefore, sulfacytine should be used in pregnant women only when clearly needed.

ADVERSE REACTIONS

The most common adverse reactions associated with sulfacytine are headache, gastrointestinal disturbances, and allergic reactions (rash).

The following reactions have been associated with sulfonamide therapy.

Blood dyscrasias: agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia, methemoglobinemia

Allergic reactions: erythema multiforme (including Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia, and allergic myocarditis

Gastrointestinal reactions: nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis, and stomatitis

CNS reactions: headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, and insomnia

Miscellaneous reactions: drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and lupus erythematosus phenomena have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides), and oral hypoglycemia agents. Goiter production, diuresis, and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents.

Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

DOSAGE AND ADMINISTRATION

The usual adult dosage is 500 mg initially as a loading dose, then 250 mg four times daily for 10 days.

Due to lack of clinical experience with sulfacytine in the pediatric age group, it is not recommended for use in children under age 14.

HOW SUPPLIED

N0071-0925-Renoquid Tablets, 250 mg, are supplied in bottles of 100, unit-dose packages of 100 (10 strips of 10), and in a Therapy Pack containing 41 tablets (10-day dosage regimen). SE

PD-JA-1766-1-P (3-76)

PARKE-DAVIS

Parke, Davis & Company
Detroit, Michigan 48232

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30. Does any input document have or require any irrelevant and often confusing computer codes?

31. Is sufficient medical/accounting data entered to obtain comprehensive output, including insurance reports, and any special clinical reports, which may be needed?

32. Does the system have any safeguards to prevent errors from being entered into the computer?

33. How are errors spotted by the computer system?

34. When are errors spotted by the computer system? How is the physician's office notified?

35. How do the office aides correct their input errors? Determine the ease of correction.

36. When do office aides correct their input errors?

37. Does the vendor keep track of types of errors made so that services can be improved over a period of time?

38. Does the input method require skills which would involve a higher payroll?

39. What security precautions are taken with regard to entering false data and/or obtaining confidential information?

40. How are input problems/questions handled by the vendor?

41. How does your office staff like the method of entering patient financial data?

Output

42. What is the extent of output from the system? Obtain this information in detail.

43. Does the output include computerized insurance reports?

44. Is the output material well organized?

45. Does the monthly patient statement look "professional"? Is it complete?

46. Does your accountant (or business manager) suggest any changes or additions to the output? If so, is the

vendor willing to modify or expand his output without undue, if any, cost?

47. When is output available? Obtain this information in detail.

48. When is hard copy output available? Could this pose a potential problem?

49. Can some immediately needed data (such as a current patient receivable balance) be obtained? If so, how? Will it be correct?

50. Can special clinical and accounting reports be obtained for a nominal cost?

51. If errors are noted in the output, how and when can they be corrected?

Cost

52. Is there an installation (conversion) cost for the system?

53. What does the system cost or how are the monthly charges determined? Are there different schedules according to volume? Be sure to put different vendors' charges on a comparable basis. If applicable, is leasing a possibility?

54. If charges are based on the number of accounts, determine the definition of an account.

55. Are there separate charges for maintenance and insurance (if applicable)?

56. Are there separate charges for paper, postage, telephone calls, etc?

57. Are there separate charges for electrical wiring or for the storage of computer tapes and disks?

58. Are there extra charges for correcting errors that result from office mistakes?

59. What are the costs of special clinical and financial reports?

60. Are there any hidden costs? Play the devil's advocate role with the vendor.

61. What are the income tax and property tax implications?

62. Can other physicians use the system in a central processing/satellite arrangement? If so, how much cost reduction can be expected?

63. Can the system reduce accounting costs and/or generate income in any other ways? Research with vendor, other physicians and in medical literature. This point is important for a cost effectiveness study.