Self-Assessment in Family Practice

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.

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The following are patient management problems. After reading the stem, you should answer each question sequentially. One or more answers may be correct for each question. After you have answered each question, and before going to the next, you should turn to the answer page and review the responses to your choices while covering the answers to the next question. Repeat this process until all questions have been answered.

Question A:

A 35-year-old anxious investment broker presents with a three-month history of crampy abdominal pain together with intermittent blood and mucus in his bowel movements. He denies taking any medication other than an occasional dose of milk of magnesia before retiring. His weight has remained stable. He has been afebrile and denies any other complaints except for increasing fatigability, insomnia, and concern about cancer of the bowel which his father and uncle died from in their early 60s. He is unaware of any particular food intolerance, although he relates that he has been on an increased amount of low caloric roughage in order to control his weight.

1. Under such circumstances, you would initially:
   - A. Reassure the patient that his complaints are secondary to altering his diet and that no further investigation or therapy is necessary at the present time. He should start low roughage diet and arrange follow-up for this particular problem in three months.
   - B. Perform a complete physical examination including digital rectal exam and guaiac test.
   - C. Schedule for colonoscopic examination.
   - D. Order a carcinoembryonic antigen (CEA) assay.
   - E. Schedule for proctosigmoidoscopy in the near future.
2. If proctosigmoidoscopy, physical examination, and stool guaiac are negative, the next step would be to:
   - A. Order barium enema with air-contrast study.
   - B. Reassure patient and start low roughage diet, anticholinergic, and mild tranquilizer.
   - C. Ask patient to hematest stools daily for next month.
   - D. Order monthly CEA determinations.
   - E. Arrange for colonoscopic examination.
3. If proctosigmoidoscopy reveals evidence of a mild granulomatous colitis, the next step would be:
   - A. To initiate salicylazosulfapyridine (Azulfidine) therapy and the rectal instillation of a corticosteroid.

B. Obtain barium enema.
C. Refer to endoscopist for colonoscopic examination.
D. Order base line carcinoembryonic antigen (CEA).
E. Educate patient and assure him that change in life-style will result in disappearance of his symptoms.

4. If barium enema is equivocally positive for a colonic polyp in the transverse colon, the next step would be to:
   A. Refer to general surgeon for laparotomy.
   B. Better preparation of bowel and repeat barium enema.
   C. Refer to endoscopist for colonoscopic examination and possible excision of suspected adhesion.
   D. Repeat barium enema in six months.
   E. Refer to general surgeon for possible laparotomy only if the carcinoembryonic antigen (CEA) is positive.

5. If barium enema is positive for a 1 cm polyp located in the transverse colon, the next step would be to:
   A. Tell the patient that there is a 90 percent chance that this polyp represents malignancy, requires radical surgery, and perhaps a colostomy.
   B. Refer to competent colonoscopist for excision and pathological diagnosis.
   C. Repeat barium enema in six months to see if polyp has increased in size.
   D. Obtain base line and serial carcinoembryonic antigen determinations (CEA) at six-month intervals and intervene surgically only if titer increases.
   E. Order weekly hematest determinations of the stool and suggest surgical intervention if there is evidence of bleeding from the polyp.

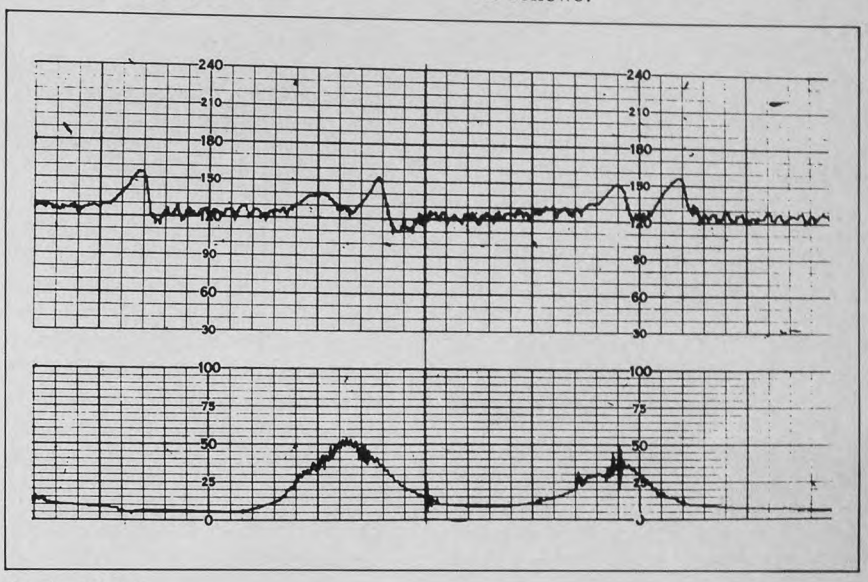
6. If pathologically the tip of the polyp is positive for malignancy but the muscularis layer of the bowel is not involved, one would:
   A. Recommend radical surgical excision of the involved segment of the colon.
   B. Initiate chemotherapy for colonic malignancy.
   C. Do a complete work-up in order to determine whether or not metastases are present, including bone and liver scan.
   D. Follow up carefully by ordering repeat barium enema and colonoscopic examination at six-month intervals for the next five years.
   E. Rely solely on the carcinoembryonic antigen to determine whether or not malignancy has recurred.

Question B:

A 23-year-old primigravida, after a normal prenatal course, spontaneously ruptured membranes at 37 weeks gestation. Twelve hours later she is examined. The vertex is at station O, the cervix 75 percent effaced, soft, and 2 cm dilated. The pelvis is clinically ample, blood pressure 124/70, fetal heart rate is 130/minute. Reflexes are normal. Estimated fetal size is 6 lbs. You decide to admit her to the hospital and do which of the following: (check as many as are appropriate)

7. A. X-ray pelvimetry
   B. Hematocrit
   C. Culture cervix
   D. WBC
   E. Induce labor
   F. Cesarean section
   G. Bed rest until onset of labor
   H. Ultrasound (B mode) scan to determine fetal maturity

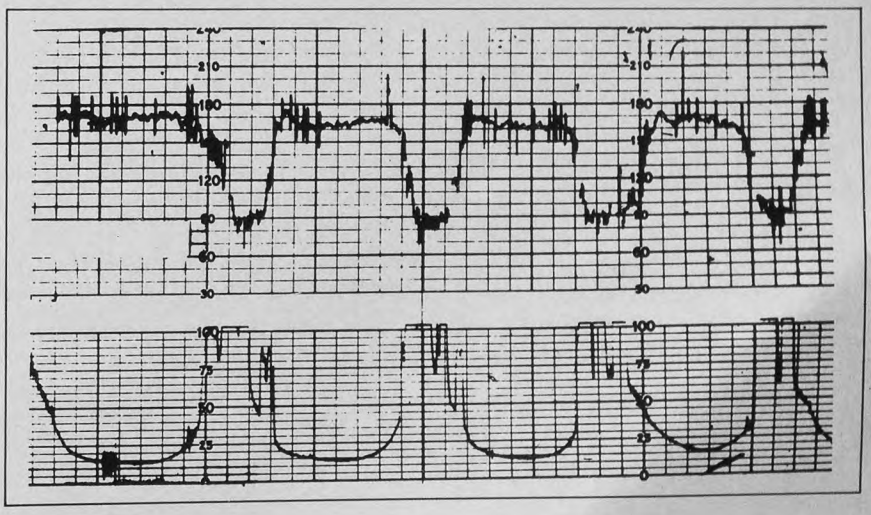
8. Labor is established and fetal heart monitors are applied. With the cervix 7 cm dilated the record appears as follows:



Tracing No. 1

You would:
A. Continue to monitor—this tracing is benign.
B. Give O_2
C. Change patient's position
D. Perform cesarean section
E. Deliver with forceps

9. After the cervix has been fully dilated for one hour, the vertex is on the perineum and the patient is starting to push with the contractions. The following fetal heart record is noted:



Tracing No. 2

You now would:
A. Continue to observe labor—the record is abnormal but not dangerous.
B. Give O_2
C. Perform cesarean section
D. Deliver with forceps

Answers and Discussion.

Question A:

1. One would be remiss to reassure this patient without further investigation. Such investigation should include a complete physical examination, a test for blood in the stool, and a proctosigmoidoscopic examination. Anything less in a 35-year-old anxious individual would probably not represent adequate initial *investigation.* Correct answers are (B) and (E).

2. If proctosigmoidoscopic and physical examination are negative, the next step would be to order a barium enema with air contrast study to rule out a polyp [answer: (A)]. The CEA determination is not an absolute test. The colonoscopic examination requires hospitalization, a rather severe preparation, and an expensive procedure. All one can determine from hematesting stools daily is whether or not blood in stool is present. This does not exclude significant pathology. In view of history of intermittent blood and mucus in the bowel movement, one would be quite casual just to start the patient on a low roughage diet, anticholinergic, and mild tranquilizer.

3. Answers: (A) and (B). To help assess the extent of a granulomatous colitis, providing the bowel is not acutely inflamed and friable, one should obtain barium enema to determine the extent of the colitis. Change in lifestyle may alleviate some of the patient's symptoms, but will not absolutely result in disappearance of his symptoms. CEA test is not absolute. Endoscopy is not necessarily indicated for a granulomatous colitis and is not without hazard in the acutely inflamed bowel. It would be premature to initiate therapy with Azulfidine and rectal installation of corticosteroid before having a base line study to determine the extent of the disease and/or whether or not there is an associated malignancy.

4. Answer: (B). Before referring to an endoscopist or general surgeon, one should prepare the bowel more completely and repeat the barium enema. If a malignancy is present, waiting six months may prove detrimental to the patient. If the CEA were positive, one would still have to determine the etiology of this and the location of the disease in order to attempt to correct it.

5. Answer: (B). A 1 cm polyp located in the transverse colon may represent a malignancy, and one cannot assure the patient that it is a benign polyp until tissue examination has been accomplished. A competent colonoscopist should be able to excise such a polyp in this location and, in turn, submit it for pathological diagnosis. Again, to procrastinate for six months and repeat the barium enema at that time is not without hazard, and one questions whether or not the barium enema is sufficiently sensitive to determine or to detect relatively small increments in growth. Again, the CEA determination is not sufficiently sensitive to rely upon in order to make a management decision. Weekly hematest determinations of the stool should not necessarily govern whether or not surgical intervention is indicated. Many polyps that are malignant do not necessarily bleed early in their development.

6. There is considerable debate about the significance of microscopic malignancy in a polyp. Much of this debate stems from the location and extent of the malignant tissue. However, snare removal of a polyp followed by careful follow-up is adequate if the muscularis layer of the bowel is not involved. This requires careful follow-up per barium enema and repeat colonoscopic examination. The CEA test is interesting, but is not sufficiently absolute to rely upon for decision making. A malignancy limited to the mucosal layer and not involving the muscularis probably does not require radical surgical excision of the involved segment of the colon.

Reference:

1. Dagradi AE, Rankin GB, Wolff WI: Colonoscopy: Going the distance for colonic polyps. Patient Care 9(10):70-94, 1975

Question B:

7. With the patient this close to term, membranes ruptured, and cervix favorable, delivery should be accomplished promptly. Since the pelvis is clinically ample and the vertex at station 0, x-ray pelvimetry is not needed. Ultrasound scan might be useful if there is uncertainty about the duration of gestation. A hematocrit or hemoglobin determination should be done on each patient admitted for delivery. Cervical culture should be done but a WBC will add little. This patient should have labor induced promptly. Thus, the correct answers are (B), (C), (E), and possibly (H).

   Labor is induced with intravenous oxytocin infusion (Pitocin).

8. Acceleration of the fetal heart with contractions (in this case from 120 to 165) is a benign response to labor and should be no cause for concern. Continue with induction of labor. (A) is correct.

9. This tracing is ominous. The patient has been in second stage for one hour and can now be safely delivered. So (D) is correct. Some O_2 would be a good idea while preparing for delivery so that (B) is also correct.

References:

1. Beard RW: The detection of fetal asphyxia in labor. Pediatrics 53:157-169, 1974
2. Hon EH: An Atlas of Fetal Heart Rate Patterns. New Haven, Harty Press, 1968
3. Low JA, Boston RW, Pancham SR: The role of fetal heart rate patterns in the recognition of fetal asphyxia with metabolic acidosis. Am J Obstet Gynecol 109:922-929, 1971
4. Wood C, Newman W, Lumley J, et al: Classification of fetal heart rate in relation to fetal scalp blood measurements and Apgar score. Am J Obstet Gynecol 105:942-948, 1969