**Table 1. Findings in 33 Cases of Subacute Thyroiditis**

| Symptom | Number |
|---|---|
| Pharyngeal pain | 28 |
| Thyroid tenderness | 26 |
| Unexplained fatigue | 24 |
| Neck pain | 21 |
| Refractory to antibiotic therapy | 12 |
| Ear pain | 11 |

clinic was not located in an area endemic for thyroid disease.

## Comment

Woolner[3] reported in 1957 a review of surgical specimens typical of subacute thyroiditis collected at the Mayo Clinic over 27 years, as well as cases diagnosed clinically over a five-year period. A total of 108 cases of subacute thyroiditis were found over the 27-year surgical experience review. During the years 1952 through 1956, 125 clinical diagnoses of subacute thyroiditis were recorded. During the same five-year period, 1,250 patients were seen with Graves' disease. McWhinney[4] collected 10 cases of subacute thyroiditis in his general practice from 1954 to 1963 and encountered only one instance of autoimmune thyroiditis. In 1956 Detweiler[2] reported 38 cases of subacute thyroiditis among 2,000 patients.

The incidence of subacute thyroiditis reported in the present study reflects the frequency of subacute thyroiditis in relation to other thyroid diseases and suggests that subacute thyroiditis is, in fact, among the more common of thyroid disorders. Underrecognition or misdiagnosis of subacute thyroiditis has undoubtedly contributed to the low incidence figures reported elsewhere.[5] The similar experience of Detweiler further suggests that most cases of subacute thyroiditis are either treated at the primary care level or resolve spontaneously and are consequently underrepresented in the case materials of secondary and tertiary care centers. Appreciation by primary care physicians of the frequency of subacute thyroiditis should enhance appropriate diagnostic efforts and therapy.

### References

1. Volpe R: Subacute or DeQuervain's thyroiditis. Clin Endocrinol Metab 6:81, 1979
2. Detweiler JA: Thyroiditis: Private practice compared with community hospital and university hospital. JAMA 192:1098, 1965
3. Woolner LB, McConahey W, Beahrs OH: Granulomatous thyroiditis. J Clin Endocrinol 17:1202, 1957
4. McWhinney IR: Incidence of DeQuervain's thyroiditis: Ten cases from one general practice. Br Med J 1:1225, 1964
5. Greene JW: Subacute thyroiditis. Am J Med 51:97, 1971

# Evaluation of the Patient-Centered Pelvic Examination

Ronald J. Feldmann, MD, and Charles E. Driscoll, MD
Iowa City, Iowa

The pelvic examination is a common office procedure in family practice that may be perceived by the patient as an unpleasant, uninteresting, and anxiety-provoking experience. A perceived negative attitude by women toward the pelvic examination, along with women demanding more basic information concerning their bodies today, has aroused the interest and concern of many health care professionals.

This communication presents the results of a

From the Department of Family Practice, College of Medicine, University of Iowa, Iowa City, Iowa. Requests for reprints should be addressed to Dr. Charles Driscoll, Department of Family Practice, College of Medicine, University of Iowa, Iowa City, IA 52242.

Continued on page 992

0094-3509/82/050990-03$00.75

Continued from page 990

controlled study of a method that involves incorporating patient education into the procedure by allowing the patient to become an active participant in the examination through using a hand-held mirror and a running educational dialogue by the physician. No controlled study utilizing the mirror examination with a dialogue of instruction has been found to exist in the literature.

## Methods

The working hypotheses of this study were that the patient-centered pelvic examination (1) increases patient relaxation and comfort, (2) creates a more knowledgeable patient in terms of anatomy and function of the female genitalia, and (3) is a well-accepted gynecologic procedure.

The project was conducted at two family practice offices of the University of Iowa Hospitals and Clinics. Thirty-nine women requesting a routine Pap smear and pelvic examination were randomized into control and study groups. Twenty patients in the control group underwent a routine pelvic examination and Pap smear using the traditional approach. This approach utilized the normal lithotomy position and routine draping, which prevents direct eye contact with the physician and precludes patient observation of the examination. Nineteen patients in the study group underwent a similar examination using the mirror technique and patient education. The mirror technique involved placing the patient in the lithotomy position with the head elevated approximately 60 to 90 degrees and allowing the patient to face the examining physician and observe the procedures with a hand-held mirror. A dialogue of instruction was used by the physician to point out and name the various anatomical structures along with their functions. Questions were encouraged to increase the patient's participation in the examination. The total time to complete the pelvic portion of the examination was recorded for both methods. Following the examination both patient groups were given questionnaires that included a subjective portion dealing with their comfort, relaxation, and attitudes, and an objective portion concerned with measuring their knowledge of anatomical structures. No patient declined to answer the questionnaire, and consent for the study was implied by the patients' willingness to complete and return the

questionnaire. After randomization, examinations of both groups were performed by either a second-year family practice resident physician or a family practice faculty physician. Only two physicians participated as examiners. The physicians also completed a questionnaire following each examination concerning their perception of the patient's level of anxiety, physical comfort, and interest. Two patients who declined use of the mirror technique were eliminated from the study.

Responses on the patient and physician questionnaires were recorded on a five-point forced-choice Likert scale. The data comparing the control and study groups were analyzed using the unpaired two-tailed $t$ test. Data comparing perceived change in experiences from past to present examinations by the same patient were analyzed using a matched-pair two-tailed $t$ test. A confidence level of $\alpha < .05$ was chosen for significance.

## Results

There was no significant difference in age between the control and study groups. Occupations varied widely in both groups. The average number of previous pelvic examinations per patient within each group was not significantly different.

The control group patients had felt more relaxed than the study group patients during their past examinations. No difference was found between control and study groups concerning patient comfort during past pelvic examinations. There was also no difference between control and study groups concerning patient relaxation and comfort during the present examinations. When assessed for a change in relaxation and comfort from past examinations to the present examinations, the control group showed a significant change toward increased relaxation ($t = 3.32$, P = .998) and comfort ($t = 4.39$, P = .999). Likewise, in the study group relaxation ($t = 4.29$, P = .999) and comfort ($t = 3.92$, P = .999) improved from past to present examinations. When comparing these changes in relaxation from past to present examinations between both groups, the study group improved more in relaxation than the control group, nearly reaching significance ($t = 1.96$, P = .971). There was no similar trend in the improvement of comfort.

Both groups felt it was easy to ask questions during the examinations, and no significant difference was noted. There was also no difference in knowledge of anatomical structures between groups as objectively assessed following the examinations in both groups. A statistically significant change was seen in the patients' subjective perception of new things learned about the anatomy of the female genitalia, with the study group feeling more was learned ($t = 4.70$, P = .999) during the present examinations.

Seventeen of the 20 control group patients (85 percent) felt that using a hand-held mirror would not have improved the examination, whereas 2 (15 percent) believed it would have improved it. One patient did not respond. Thirteen of the 19 study group patients (68 percent) preferred to use the mirror for their next examination, whereas 3 (16 percent) did not desire the mirror, and another 3 (16 percent) were uncertain. All 19 would recommend using the mirror to a friend. Eleven (58 percent) patients in the study group had used a mirror in a past pelvic examination. The mean time for the pelvic portion of the gynecologic examination was 3 minutes 8 seconds for the control patients and 4 minutes 24 seconds for the study patients.

No significant difference was found between the groups in terms of physician perception of patient relaxation and comfort. Using unsolicited feedback from the patients as a measure, the physicians observed more participation and cooperation and more enthusiasm during the examination of the study group patients. The total number of questions was significantly higher in the study group patients than in the control group patients.

Only one of the three hypotheses was well supported by the data: The patient-centered pelvic examination (1) did not subjectively increase patient relaxation and comfort, although there was a trend for greater change in relaxation; (2) did not objectively create a more knowledgeable patient in this sample group, but subjectively it was a learning experience; but (3) was, however, well accepted by the patient, as reflected by the majority of women expressing interest in using the mirror again and in recommending it to their friends. A positive finding of the study was that the patient-centered gynecologic examination encouraged more communication. There was no increase in stress or discomfort in the patient that could be measured by this study when she was included as an active participant in the examination. Further study of the mirror technique accompanied by patient education during the pelvic examination is recommended.