

DIAGNOSTIC INTEGRATED PROGRAM IN BREAST PATHOLOGY: CLINICAL EXPERIENCES

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Summary: 1068 patients were examined using a unified diagnostic protocol. 618 patients at high risk were screened out, and underwent further instrumental and surgical investigation. 17 cases of breast cancer were detected, while the remaining patients were addressed to an appropriate, highly reliable and repeatable follow-up for breast care.

The social and sanitary implications of benign (mastodynia, fibrocystic mastopathy, cysts, fibroadenoma), and malignant breast disease necessitate the formulation of a schematic, simple, and possibly complete investigative protocol. The diagnostic procedure we propose (tab. 1) unifies several trends present in the literature (^{1-3, 6, 13, 17}), and our own past experience. The current policy responds to two requests: to follow diagnostic procedures that are efficacious (sensitivity and specificity), economic, practical, and repeatable; to unify methods which rapidly screen out suspect cases, and thus reduce the number of candidates for successive examination, and consequently, the costs involved.

Mass screening entails a first battery of examinations: history-taking objective examination, thermography and diaphanoscopy (¹). History-taking singles out cases at risk (about 30% of the female population), and the symptomatic patients. Objective examination has a fundamental importance (³). Thermography (distance or contact) studies the metabolic-functional aspect of breast tissue. We prefer contact thermography because this technique costs less, and it is faster to use (⁵⁻¹⁰). Diaphanoscopy (transillumination technique) is completely aspecific because it

does not offer pathognomonic pictures, but it is highly sensitive and reveals 97% of tumors over 1 cm in diameter (^{4, 6}).

This first contact with the patient, be she asymptomatic or symptomatic, enables a first separation between presumably healthy women, who can be followed-up periodically, and patients who require further investigation. In women under 40 years of age, our protocol suggests mammography as a target examination for patients who present doubtful or suspect findings on the first battery of examinations. In patients over 40 instead, in view of the higher incidence of breast heteroplastic forms in this age group, at least one mammogram is advised along with the first group of exams (^{6, 8, 11}). If mammography findings are suspect, ultrasound examination is advised for a better definition of the picture (¹³). In the presence of both solid and cystic nodular formations, fine needle aspiration biopsy is recommended (¹⁵⁻¹⁷) with cytological examination of the material obtained; in the case of cystic formations, pneumocystography is indicated for the known diagnostic implications. In the presence of solid lumps, we consider it wise to perform biopsy in the out-patient clinic.

The successive diagnostic step is reserved for diagnostic surgery; for example, in cases of cysts that contain blood, or do not collapse following needle aspiration, or that form again within a short

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Table 1. — *Integrated Diagnostic Program in Breast Pathology adopted at Obst. Gyn. Institute University of Padua.*

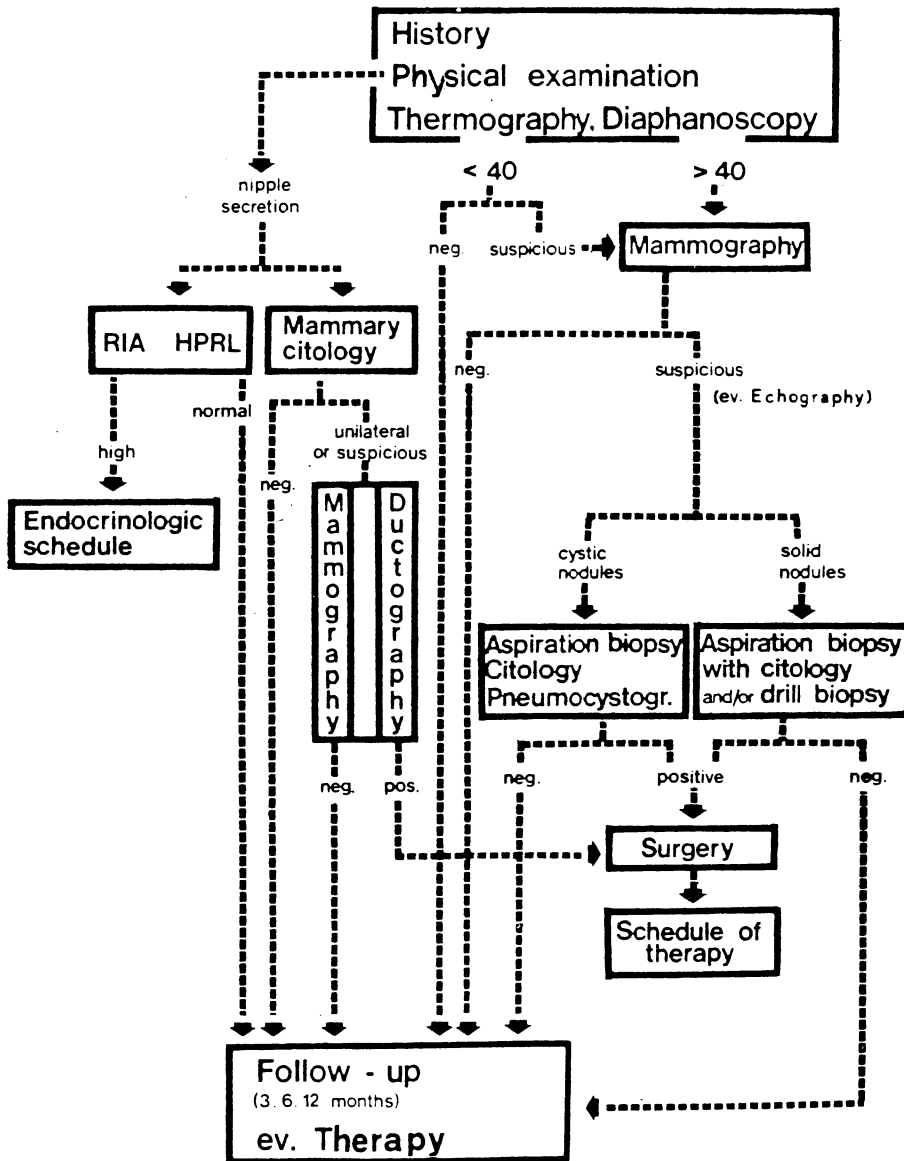
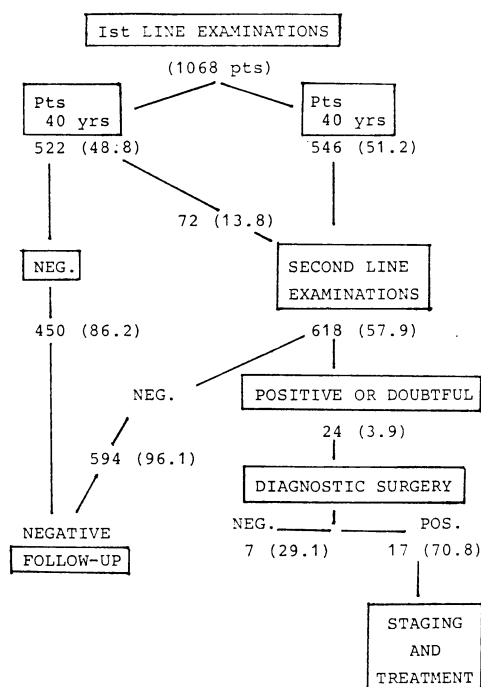


Table 2. — Results of diagnostic integrated program (1981-1984) (number of patients; % in brackets).



time period, or are pneumographically suspected, and in the case of a contrast between the clinical picture (negative) and instrumental findings positive or suspect).

The spontaneous or expressed nipple secretion is evaluated with hormone assay (RIA, prolactin) and contemporaneous cytological examination. If prolactin levels are above normal limit, the patient is admitted into an endocrinology protocol. Breast secretion cytology is important only if it is positive⁽¹⁴⁾. Clinical examination for monolateral, and particularly mono-orificial secretions deserves particular attention, since the presence of the latter calls for radiological examination with contrast medium. A positive or suspect ductographic finding requires diagnostic surgical procedure.

Rigorous adherence to a correct diagnostic procedure will lead to the histologic definition of the pathologic breast pictures under examination, and the most appropriate therapeutic approach. Lastly, it is important to stress that periodic check-up, with intervals and modalities dependent upon the pathology found, represents the cardinal point of the screening program, as it guarantees the most appropriate follow-up of both symptomatic and asymptomatic breast disease.

CASE SERIES

In the three year interval from March 1981 to February 1984, 1068 women were examined at the breast care center of the Gynecology and Obstetrics Clinic of the University of Padua; in all cases, the unified diagnostic protocol in use in the clinic was rigorously followed. Each patient's medical history was recorded, and accurate objective examination as well as contact thermography and diaphanoscopy were performed (tab. 2). Among these patients, 522 (48.8%) were under 40 years of age, and 72 (13.8%) had requested II level testing (mammography, ultrasonography, ductography, needle aspirate) since clinical and/or functional exams placed in a high risk group. The remaining 500 patients (86.2%) that were negative either clinically and/or functionally

Table 3. — Value of cytology in the diagnosis of breast feedings.

Breast feeding cytology	no.		Mammography		pos.
	no.	%	no.	%	
Negative	82	55.7	43	53.0	1
Hyperplasia	42	28.5	20	24.6	0
Atypic hyperplasia	5	3.4	5	6.4	0
Metaplasia	9	6.2	6	7.4	1
Inadequate	6	4.0	4	5.0	0
Neoplastic cells	2	1.3	2	2.4	2
Paget's cells	1	0.9	1	1.2	1
Total	147	100	81	100	5

were directed to periodic follow-up examination every 6/12 months.

Of the 546 patients over 40 years of age (51.2%) only 46 (8.4%) underwent radiodiagnostic examination because of the risk associated with their age. The remaining 500 patients (91.6%) besides the age factor presented a medical history and/or clinical and/or instrumental findings that required ascertainment at the II level.

On the whole, 618 patients underwent II level examination (57.9%). Among these, 594 were negative (96.1%) for neoplasia, and were consequently also directed to periodic check-ups at 3/6/12 month intervals.

In 24 patients (3.9%), findings were suspect or positive for neoplasia, and these cases underwent III level surgical diagnostic examination (drill biopsy, ductectomy, lumpectomy). Among these, malignant disease was confirmed in 17 (70.8%); these patients were then entered into protocols for staging and appropriate therapy.

The problem of the nipple screening deserves comment. In the series examined, we observed 147 patients (13.7%) with nipple secretions.

Cases of galactorrhea were studied by evaluating RIA assay of prolactin. 11 cases (12.9%) were hyperprolactinemic, and 74 (87.1%) were normal. In all patients, cytological examination of the secretion was carried out; on the basis of this result associated with clinical findings, mammography and ductography were performed (tab. 2). Cytology was positive in 3 cases (2.3%), which were all confirmed on mammography and subsequently, on histology. In 2 cases (1.36%) with negative cytology, mammography was performed on the basis of clinical findings, and resulted positive; this confirms the wellknown data regarding the positive predictive value of cytology.

CONCLUSIONS

From the results of this unified protocol, we can draw the following conclusions: firstly, it is highly feasible, and costs are contained without compromising its reliability; secondly, it is useful not only in the screening for dysfunctional and benign forms. Finally, the importance of periodic patient check-ups with I level examinations for appropriate breast follow-up should be stressed. These exams are practical, sensitive, repeatable and economic.

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