

# Vulvar invasive and intraepithelial neoplasia

## *Comparison of some epidemiological and clinical data*

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*Summary:* We have compared some of the epidemiological and clinical data of 45 patients affected by Vulvar Intraepithelial Neoplasia (VIN) and of 42 patients affected by Invasive Vulvar Neoplasia who came to our observation between 1986 and 1991.

We have evaluated and compared the average age in the two groups of patients, their vulvoscopic pictures and the symptomatology referred at the time of the patients' diagnosis.

*Key words:* Vulvar neoplasias; Diagnosis.

Most Authors agree in assessing the incidence of invasive epidermoid carcinomas of the vulva at around 3-5% of all malign neoplastic pathology of the lower genital tract (<sup>1, 2, 3</sup>).

These forms of neoplasia affect mainly elderly women, with a peak age between 65 and 70 years (<sup>1, 2, 3</sup>), while Vulvar Intraepithelial Neoplasia (VIN) is more frequently diagnosed in women between 40 and 50 years of age (<sup>4, 5, 6</sup>).

According to some Authors, there has been a gradual increase in the incidence of VIN (<sup>7</sup>), in vulvar invasive and pre-invasive neoplastic pathology, going from 18% in 1935-1950 to 33% in 1951-1965 and reaching 47% if we consider the whole period 1935-1972.

This trend is confirmed by other Authors (<sup>8</sup>), who report a 21% incidence of VIN in comparison with invasive carcinoma in the years 1936-1950, 47% in 1966-1972 and as high as 57% in 1973-1976.

The aim of our study is to assess the incidence of vulvar pre-invasive forms, in vulvar invasive and pre-invasive neoplastic pathology, comparing age and a number of clinical data found in the two groups of patients.

### MATERIALS AND METHODS

We considered all the cases of vulvar neoplasia (42 invasive and 45 intraepithelial neoplasias) examined at the outpatients' department for Cervico-Vaginal and Vulvar Pathology of the Service of Gynaecologic Oncology and Cytodiagnostics, Institute of Gynaecology, University of Padua, from 1986 to 1991.

The vulvar lesions of these patients were assessed by vulvoscopic examination and histopathological testing of a target biopsy sample.

The incidence of invasive and pre-invasive neoplastic lesions and the mean age of the patients were calculated and compared.

We also described and compared the symptomatology present at the time of diagnosis and the vulvoscopic appearance of the lesions.

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## RESULTS

Of the 87 cases of Neoplasia of the vulvar squamous epithelium, there were 42 cases (48.28%) of invasive squamous carcinoma and 45 cases (51.62%) of intraepithelial neoplasia of various degree (Table 1).

The mean age of the patients suffering from invasive carcinoma was 69.66 years (range 17-87), while that of patients with VIN considered on the whole was 48.97 years (range 20-78); in particular, the mean age of patients with VIN III was 66 years (61.5 if we also consider Paget's Disease) (Table 2).

With regard to vulvar invasive carcinoma, in 35 cases (83.3%) the diagnosis was of well differentiated epidermoid carcinoma, in two cases (4.8%) moderately differentiated and in one case poorly differentiated (2.3%); two cases (4.8%) were verrucous carcinoma and two (4.8%) basaloma (Table 3).

Of the 45 cases of VIN, there were 23 cases (51.1%) of VIN I, 13 cases (28.8%) of VIN II, 6 cases (13.3%) of VIN III and three cases (6.6%) of Paget's Disease (Table 4).

Table 1. — *Distribution of the case record of invasive and pre-invasive vulvar neoplasia.*

|                    | No. cases | %     |
|--------------------|-----------|-------|
| Invasive carcinoma | 42        | 48.3  |
| VIN                | 45        | 51.7  |
| Total              | 87        | 100.0 |

Table 2. — *Mean age of patients suffering from vulvar invasive carcinoma and from vulvar intraepithelial neoplasia.*

|                    | No. cases | Mean age |
|--------------------|-----------|----------|
| Invasive carcinoma | 42        | 70.4     |
| VIN III            | 6         | 66.0     |
| VIN II             | 13        | 46.5     |
| VIN I              | 23        | 44.6     |
| Paget's Disease    | 3         | 52.6     |

Table 3. — *Type and histological grading of vulvar invasive carcinomas.*

|  | No. cases | %     |
|--|-----------|-------|
| Well differentiated epidermoid carcinoma       | 35        | 83.3  |
| Moderately differentiated epidermoid carcinoma | 2         | 4.8   |
| Poorly differentiated epidermoid carcinoma     | 1         | 2.3   |
| Verrucous carcinoma                            | 2         | 4.8   |
| Basaloma                                       | 2         | 4.8   |
| Total  | 42        | 100.0 |

Table 4. — *Distribution of the case record of vulvar intraepithelial neoplasia.*

|                 | No. cases | %     |
|-----------------|-----------|-------|
| VIN I           | 23        | 51.1  |
| VIN II          | 13        | 28.8  |
| VIN III         | 6         | 13.3  |
| Paget's Disease | 3         | 6.6   |
| Total           | 45        | 100.0 |

On vulvoscopy, the invasive neoplasias appeared as raised white areas in 38.1% of cases, as ulcerated areas in 23.8% of cases, as vegetating tissue in 23.8% and as hard patches in 14.3%; in the intraepithelial forms, flat white areas were found in 27 cases (60%), condylomatous-type areas in eight cases (17.7%), red areas in four cases (8.8%), eroded areas in four cases (4.4%) and, in only one case (2.2%) an ulcerated area and an area of hyper pigmentation (Table 5).

Symptomatology was present in 85% of the cases of invasive carcinoma and in 49.9% of the cases of VIN. Pruritus was the symptom most frequently found in the two groups of patients (52.3% of the cases of invasive carcinoma and 28.8% of the cases of VIN). Other symptoms reported by patients were burning (16.6% of the invasive forms and 13.3% of VIN), pain (16.6% of carcinoma and 4.4% of

Table 5. — *Findings of the vulvoscope examination at the time of the diagnosis.*

|                            | Invasive carcinoma |       | VIN       |       |
|----------------------------|--------------------|-------|-----------|-------|
|                            | No. cases          | %     | No. cases | %     |
| Raised white areas         | 16                 | 38.1  | —         | —     |
| Flat white areas           | —                  | —     | 27        | 60.0  |
| Ulcerated areas            | 10                 | 23.8  | 1         | 2.2   |
| Vegetating tissue          | 10                 | 23.8  | —         | —     |
| Raised hard patch          | 6                  | 14.2  | —         | —     |
| Condilomatous - type areas | —                  | —     | 8         | 17.7  |
| Red areas                  | —                  | —     | 4         | 8.8   |
| Eroded areas               | —                  | —     | 4         | 8.8   |
| Areas of hyperpigmentation | —                  | —     | 1         | 2.2   |
| Total                      | 42                 | 100.0 | 45        | 100.0 |

Table 6. — *Symptomatology reported by patients at the time of the diagnosis.*

|             | Invasive carcinoma |       | VIN       |       |
|-------------|--------------------|-------|-----------|-------|
|             | No. cases          | %     | No. cases | %     |
| Pruritus    | 22                 | 52.3  | 13        | 28.8  |
| Burning     | 7                  | 16.6  | 6         | 13.3  |
| Pain        | 7                  | 16.6  | 2         | 4.4   |
| Dyspaurenia | —                  | —     | 1         | 2.2   |
| No symptoms | 6                  | 14.2  | 23        | 51.1  |
| Totale      | 42                 | 100.0 | 45        | 100.0 |

VIN) and dyspaurenia (2.2% of VIN) (Table 6).

Finally we have to report one case of invasive carcinoma diagnosed in a 17 year-old-patient; this was a well differentiated epidermoid carcinoma with the macroscopic appearance of a vast ulcerated area (7 cm by 3 cm). The patient said she had felt pruritus for a long time and pain during the last year.

## DISCUSSION

The incidence of the vulvar invasive forms we found was 48.28% of all invasive and pre-invasive neoplastic pathology brought to our notice in the years 1986-1991.

This figure agrees with the results reported by other Authors (<sup>7, 8</sup>), who also noted that the increased incidence of VIN is still not paralleled by a decrease in the incidence of vulvar invasive carcinoma. In our case records the mean age of the patients with VIN I, II, III was 48.97 years, slightly less than that reported in a number of studies (<sup>5, 9</sup>); the mean age of the patients with VIN III was 66 years (61.5 if we consider the cases Paget's Disease). The mean age of the patients with invasive neoplasia was 69.66 years, which shows a difference of 20 years in comparison with VIN considered as a whole. Various Authors (<sup>10, 11, 12, 13</sup>) report a mean age between 40 and 50 years for VIN III, which is much lower than that of our case record; basing their observations on the epidemiological datum of the long interval between the mean ages for the "in situ" and for the vulvar invasive form, they believe that intraepithelial forms are not destined in all cases to evolve into invasive forms. In the opinion of these Authors, only cases of VIN III in elderly women are true pre-invasive forms, whereas this evolutionary tendency is not found in young women. However, we must not forget the hypothesis of a longer time of evolution towards an invasive form in this epithelium which is more "stable" than the cervical metaplastic epithelium. In our case record, the mean age of the patients with VIN III was only five years less than that of the patients with invasive carcinoma (eight years if we also consider Paget's Disease).

The distribution according to age shows that over half of the cases of invasive carcinoma (25 out of 42) were diagnosed in women of over 70 years of age. In these patients the vulvar lesions were much more widespread than those found in younger women. This might lead us to think that the vulvar carcinoma had started a long time ago, but that the older

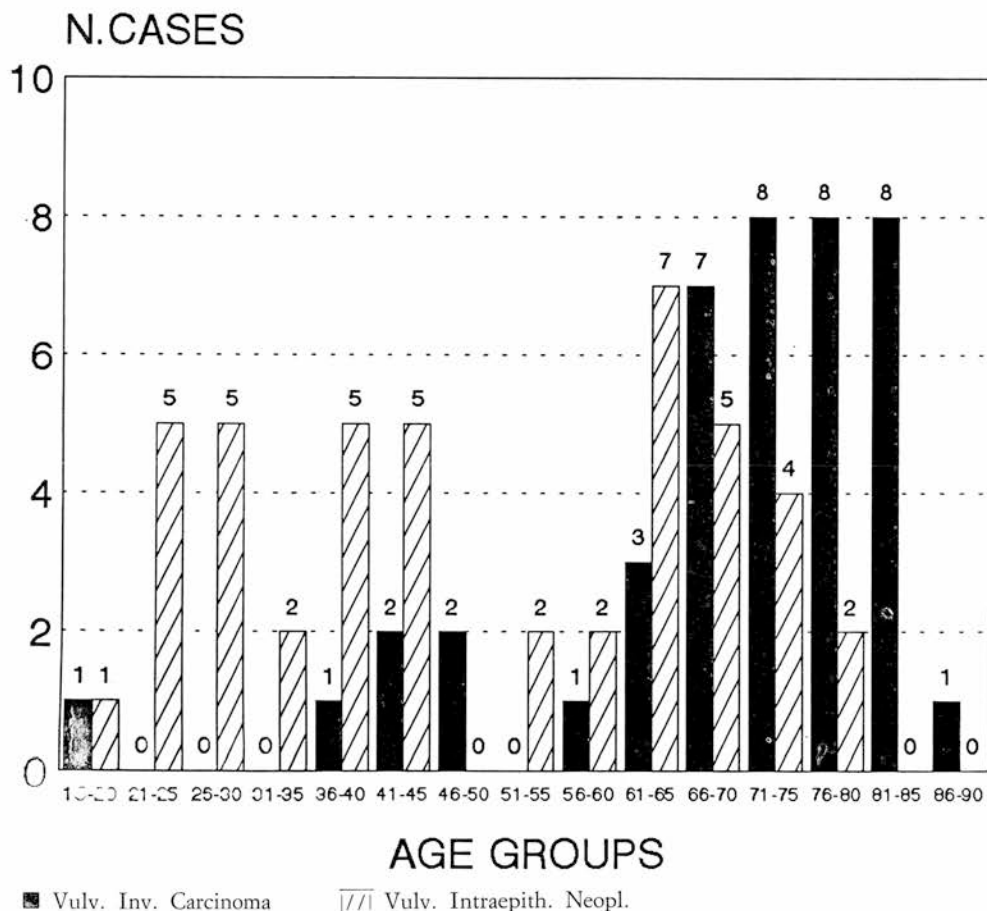


Fig. 1. — Distribution of cases of Vulvar Invasive Carcinoma and VIN according to age groups.

patients did not consult the doctor earlier, both because of the slow evolution of the disease and, consequently, the late appearance of the symptomatology, and because they are generally very reluctant to have check-ups.

However, it must be pointed out that the symptomatology, when present, is completely non-specific in most cases; in fact, pain is reported in only 16.6% of cases of invasive carcinoma. On the other hand this symptom is reported by patients with VIN in only 4.4% of cases.

Numerous patients have no symptoms at all, 14.2% of those with invasive carcinoma and 51.1% of those with intraepithelial neoplasia.

We are now finding that more women, even in higher age groups, are having regular check-ups, so that genital intraepithelial neoplasias are diagnosed more frequently; in coming years it will be interesting to see whether there has been a decrease, and to what extent, in the incidence of invasive forms due to secondary prevention and early diagnosis

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