Introduction

Vulvar squamous cell carcinoma constitutes from 1 to 4 percent of all female cancers, and is placed fourth among female genital tract neoplasias. According to clinical, pathological, and ethiological presentation, it is classified into two main categories (Chart 1):

1. Vulvar intradermal neoplasia (VIN) or in situ carcinoma.
   1.1. Usual or classic VIN (associated to HPV infection).
   1.2. Differentiated VIN (associated with lichen sclerosus and epithelial dysplasias).
   1.3. Non-classified VIN.
2. Invasive carcinoma.

Usual VIN refers to human papilloma virus infection, especially serotypes 16 and 18, and less frequently serotypes 31, 33, 35, and 39. It appears in young women, and the incidence increases according to the age at onset of sexual intercourse, the number of sexual partners, smoking, and the use of immunosuppressive drugs. Differentiated VIN appears in older women associated with lichen sclerosis in 15 to 40 percent of the cases.
Invasive carcinoma penetrates the basement membrane, and it is classified into four stages according to FIGO staging (International Federation of Gynecology and Obstetrics).

**Objectives**

1. To determine incidence of vulvar squamous carcinoma in our setting.
2. To detect average age and predominant signs and symptoms.
3. To obtain objective clinical and pathological invasion degree of lesions.
4. To identify dominant risk factors.
5. To determine types of therapy performed.

**Material and methods** (Chart 2)

A retrospective, observational study was performed, including 454 patients from the vulvar pathology consulting office of Hospital “Luis Lagomaggiore” between January 2003 and August 2008. It must be highlighted that dermatologists and gynecologists work jointly in this consulting office, which receives referred patients exclusively; therefore, consulting patients present themselves with pathologies not resolved at primary health centers.

The study enrolled 28 patients with clinical and pathological diagnosis of vulvar squamous cell carcinoma. Clinical record and pathological and iconographic data archives were reviewed.

**Results**

Between January 2003 and August 2008, 454 patients of a 15 to 90-years age range consulted our office (mean 51.5 years). Diagnosis of squamous cell carcinoma was established in 28 patients, constituting 6.17 percent of our population. From the total of genital carcinomas, vulvar squamous cell carcinoma appeared in 5 percent of genital tract tumors, preceded by cervical, endometrium, and ovary carcinomas.

Average age of squamous cell carcinoma incidence, including epitelial neoplasia and invasive carcinoma, was 62.5 years with the following age distribution: 20 to 30 years: 10.7 percent, 31 to 40 years: 7.14 percent, 41 to 50 years: 3.57 percent, 51 to 60 years: 22 percent, 61 to 70 years: 22 percent, 71 to 80 years: 19 percent, and 81 to 90 years: 15 percent. From the 28 squamous cell carcinomas, 18 invasive carcinomas (64.28 percent) (Figures 1, 2, and 3), and 10 VIN (35.7 percent) (Figures 4 and 5) were detected.
Predominant symptom was itching in 85.7 percent of the cases, followed by pain in 42.8 percent of the cases. Most outstanding signs were tumor in 32 percent, and bleeding in 40 percent. Location coincided with the one described in the literature: dominant in labia (57 percent), followed by diffuse involvement forms (28 percent), clitoris (10.7 percent), and perineum in one patient (3.57 percent).
Staging at the time of diagnosis was stage II or higher in 58 percent in invasive carcinomas, and stage 0 in VIN (Table 1).
Lapse from onset of lesions to consulting was greater than 8 months in more than 80 percent of the cases.
From the total of squamous cell neoplasias, 10 patients had diagnosis of VIN (35.7 percent), four developed from lichen sclerosus, three from epithelial dysplasia (differentiated VIN), and three had diagnosis of bowenoid papulosis (usual VIN).

**Table 1. Lesion Staging.**

<table>
<thead>
<tr>
<th>STAGE</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td>S0</td>
<td>10</td>
<td>35.7%</td>
</tr>
<tr>
<td>S1</td>
<td>2</td>
<td>7.14%</td>
</tr>
<tr>
<td>S2</td>
<td>8</td>
<td>28.5%</td>
</tr>
<tr>
<td>S3</td>
<td>4</td>
<td>14.2%</td>
</tr>
<tr>
<td>S4</td>
<td>4</td>
<td>14.2%</td>
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</table>

Therapy varied according to type of lesion and degree of invasion.12-14 In the cases of usual type of intraepidermal vulvar neoplasia (bowenoid papulosis), imiquimod therapy was instituted three times a week for 14 or 16 weeks, with good response.15,16 Differentiated VIN lesions, both from lichen sclerosus and severe epithelial dysplasia, were mainly treated by local resection, except where lesions were clinically multicentric, which were more extensively excised by surgery (simple vulvectomy).17,18

Discussion

According to statistics, vulvar squamous carcinoma accounts for 1 to 4 percent of female tumors. Incidence shows an exponential progressive increase related to human papilloma virus infection, especially associated to serotypes 16, 18, 31, and 33.8 Predisposing factors are mainly age at onset of sexual intercourse, number of partners, the presence of acumminated condiloma, immunosuppression, lichen sclerosus, bad hygiene, and smoking.8,10

The number of vulvar squamous carcinomas (5 percent of genital tract carcinomas) found at Hospital "Luis Lagomaggiore" exceeds the percentage referred to in the literature, probably because it is a province reference center with higher number of patients with rare pathologies.1,2 Average age of detected incidence was 62.5 years, which is expected to decrease with time, due to the exponential increase of human papilloma virus infection mainly affecting young women.
Lesion location and dominant signs and symptoms coincide with those published in the international literature; noteworthy is the delayed patient consultation, with higher incidence of lesions in stage II or higher.11 Therapy varied according to type of lesion and degree of invasion.12-14

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With time, the trend is to reduce the size of vulvar excisions, because they cause great morbidity without survival improvement. Radical vulvectomy has been replaced by broad local excision with at least 1 cm margins; it was found that in T1 (size lesion < 2 cm) there were no increase in recurrences, and statistical data is lacking in T2 (size tumor > 2 cm) or higher.

Montones et al. found 50 percent recurrences with less than 8 mm margins, while De Hullu reported 0 percent recurrences with larger than 8 mm margins, and 22.5 percent with less than 8 mm margins.\textsuperscript{18}

Current standard therapy is broad local excision with 2 cm margins and unilateral or bilateral inguinofemoral lymphadenectomy by the triple incision technique (preferably preserving fascia lata and saphenous vein) after detecting sentinel lymph node.\textsuperscript{19-23}

The purpose of this work was to determine vulvar carcinoma incidence in our setting; noteworthy is the delayed patient consultation, probably due to lack of information.

Highlighted is the need of intensifying vulvar carcinoma prevention through extended information diffusion, both among the general population and health personnel, because only the thorough examination of the vulvar area, and the joint work of dermatologists and gynecologists may enable early detection of pre-neoplastic and neoplastic lesions.

\textbf{References}

neoplasia. Gynecol Oncol 2006; 100:276-282.