

Systemic and Oral Alterations in Brazilian Patients with Cutaneous Herpes Zoster

Heron Fernando de Sousa GONZAGA¹
Maria Augusta JORGE¹
Lúcia Helena de Sousa GONZAGA²
Calógeras A.A. BARBOSA³
Marcelo Donizetti CHAVES⁴

¹Research Center – Center of Higher Education of Dracena – CESD, Dracena, SP, Brazil

²Department of Restorative Dentistry, Faculty of Dentistry, University of Marília, Marília, SP, Brazil

³Department of Genetics and Evolution, Faculty of Health Sciences, Federal University of São Carlos, São Carlos, SP, Brazil

⁴Department of Oral Pathology, Faculty of Dentistry, University of Campinas, Piracicaba, SP, Brazil

Herpes zoster (HZ) is a virotic disease caused by *Herpesvirus varicellae*. The objective of this study was to determine the factors that trigger the disease, and the systemic and oral alterations present in Brazilian patients with herpes zoster. A total of 30 patients with HZ and 100 control patients with other diseases were studied. Of the 30 patients with HZ, 13 were male (43.3%) and 17 were female (56.7%), with an average age of 43.2 (range 3-78). The patients were submitted to general clinical, dermatological and intraoral examinations. Only 50% of the HZ patients reported emotional stress at the onset of the disease. A total of 3.7% of the patients were positive for HIV and 11.1% for systemic malignant neoplasm. Cutaneous lesions were found on the thorax (68.3%), face (20%), lower limbs (10%) and upper limbs (6.7%). Specific oral involvement such as oral HZ was not found. The presence of the disease may indicate a non-diagnosed malignant neoplasm and/or association with AIDS.

Key Words: herpes zoster, varicella, mouth.

INTRODUCTION

The association between varicella and herpes zoster (HZ) was first made in 1892. It was later recognized that the pathologic changes of herpes zoster were usually limited to one dorsal root ganglion or the sensory ganglion of a cranial nerve producing pain and skin lesions along the distribution of the involved nerve(s). It is now well established that a herpes zoster infection (shingles) requires pre-exposure to the varicella-zoster virus. The primary varicella virus infection causes an acute, generally mild, infection (chicken pox) and the virus subsequently establishes latency elsewhere within sensory ganglia. The virus is then later reactivated to cause a herpes zoster (HZ) infection (1).

HZ in childhood is rather unusual (2), and both immunocompetent and immunocompromised individu-

als may be affected (3). The most important etiologic factors of HZ are increased age or a compromised immune system. Emotional stress, especially recent events perceived as stressful, also seems to be an important factor (1). The presence of the disease may indicate a non-diagnosed malignant neoplasm. Many different malignant neoplasms may be probable factors that trigger HZ, such as Hodgkin's disease, leukemias and lymphomas (4,5). More recently, AIDS has become an important factor because it may trigger HZ, causing a higher incidence of HZ among young people.

An HZ virus outbreak is commonly characterized by easily observed vesicular skin eruptions that follow the anatomic distribution of affected nerve(s) or nerve branch. Prodromal severe pain is almost always present during these outbreaks. In many cases, pain is the first symptom in the involved area(s) 3 to 5 days

before eruption of the vesicles. A few cases have even been reported without vesicular eruption, making diagnosis difficult (1). Mucous membranes within the affected dermatomes may also be involved (4). However, an aspect that is not usually researched is the oral involvement.

This study determined the factors that trigger the disease, and systemic and oral alterations present in Brazilian patients with HZ.

MATERIAL AND METHODS

The sample was made up of 30 patients with HZ and 100 patients with other diseases (control), who were seen at the dermatological clinic at the Research Center – Center of Higher Education of Dracena – CESD. The patients of the control group had eczema, fungi infections, skin tumors, virus infections, urticaria and skin color disorders. Of the 30 patients with HZ, 13 were male (43.3%) and 17 were female (56.7%), with an average age of 43.2 (range 3-78). In the control group, 26 were male (26%) and 74 were female (74%), with an average age of 36.1 (range 5-79). The patients were submitted to general clinical, dermatological and intraoral examinations. A complete history was taken including present illnesses or diseases, past medical history, tobacco and alcohol consumption, past surgeries and atopy.

The data of both groups were compared by the chi-square statistical test.

RESULTS AND DISCUSSION

There was a higher incidence between 60 to 80 years of age (30%). The other age groups were as follows: 0 to 20 years (20%), 20 to 40 years (23.4%) and 40 to 60 years (26.6%). More than 55% of patients were over 40 years of age, in agreement with the literature (4).

The literature reports emotional stress to be associated with the disease (4), however, only 50% of the present patients reported emotional stress at disease onset. Many different situations which were probable causes of stress were observed in these patients, such as irritability, depression, death of family member, introversion, anxiety, divorce of parents, misery, adultery of spouse and jealousy. The percentage of emotional stress as a factor to the triggering of the disease may have

been greater than the patients reported, or they may not have been aware of the emotional factors. It would have been interesting to have submitted these patients to a full emotional evaluation with psychological tests. Had this been done, other denied conflicts could have been detected.

Of the systemic diseases reported in the history, only arterial hypertension (HZ-30%, CG-10%), rhinitis (HZ-20%, CG-13%), diabetes mellitus (HZ-13.3%, CG-3%), bronchitis (HZ-13.3%, CG-1%) and sinusitis (HZ-10%, CG-1%) were significantly different between groups.

For a person to have herpes zoster, he/she must have had varicella in the past (1). Only 63.3% of the patients acknowledged having varicella in the past. It is questionable whether the other 36.7% had subclinical varicella in the past or if they were not aware of the disease.

A compromised immune system can be the trigger of the disease. The presence of the disease can indicate a non-diagnosed malignant neoplasm or the presence of AIDS (diagnosed or not) (4,6,7). A total of 3.7% of the patients were HIV positive and 11.1% had systemic malignant neoplasm. The possibility of undetected HIV infection should be considered in all patients, particularly in homosexual men under 50 years of age for whom the possibility of coexisting undetected HIV infection is probably greater than 50% (6). In this study, one of the HIV-positive patients was a bisexual under 50 years of age with undetected HIV.

There were no statistically significant differences between groups in terms of tobacco consumption (HZ-13.3%, CG-17%), past surgeries (HZ-66.7%, CG-52%) and atopy (HZ-80%, CG-82%); however, there was a highly significant increase of alcohol consumption in HZ patients compared to control patients (HZ-40%, CG-14%; chi-square = 9.32, DF=1, p<0.01). It is possible that alcohol consumption may be factor triggering the disease.

The thoracic (53%), cervical - usually C2,3,4 - (20%), trigeminal, including ophthalmic (15%), and lumbosacral (11%) dermatomes are most commonly involved at all ages, but the relative frequency of ophthalmic zoster increases in the elderly. Rarely is eruption bilateral (4). In ophthalmic zoster, ocular complications occur in 50% of cases, and should be expected when vesicles on the side of the nose indicate involvement of the nasociliary nerve (4). In this study, no case

with ocular involvement was observed. However, all patients with facial involvement were referred to an ophthalmologist to prevent cornea involvement which can lead to blindness.

The sites of cutaneous lesions were the thorax (63.3%), face (20.0%), lower limbs (10.0%) and upper limbs (6.7%). Patients with disseminated HZ may present severe abdominal pain that results from visceral involvement of varicella zoster infection. In the absence of cutaneous eruptions of herpes zoster, visceral HZ is extremely difficult to diagnose (8). Depending on the site of the lesions, diagnostic errors can be made, such as abdominal pain without vesicles being diagnosed as appendicitis.

Viral infections of the oral mucosa and perioral region are commonly encountered in the practice of dentistry. The accurate and timely diagnosis of such infections, coupled with the appropriate treatment, can often permit quick resolution of the condition with minimal discomfort and anxiety for the patient and prevent the spread of infection to others, especially immunocompromised individuals (9).

Mucous membranes within the affected dermatomes may also be involved. Zoster of the maxillary trigeminal nerve produces vesicles on the uvula and tonsillar area, while in involvement of the mandibular division, the vesicles appear on the anterior part of the tongue, the floor of the mouth and the buccal mucous membrane. In orofacial zoster, toothache may be the presenting symptom (4). Oral alterations were present in 66.7% of HZ and 41% of CG patients (chi-square = 5.92, DF = 1, $p < 0.01$). However, specific oral involvement such as oral HZ was not found. In the literature, it is reported that all of the patients with facial skin lesions also have oral lesions (10).

Denture stomatitis was found in 18.5% of HZ and 18% of CG patients. This was probably associated with use of total dentures, and not with the disease. The prevalence of fissured tongue (HZ-25.9%, C-13%) and benign migratory glossitis (HZ-14.8%, C-3%) was statistically greater in HZ. These conditions are associated and are also reported to be greater with psoriasis (11,12). The link factor between HZ and benign migratory glossitis may be emotional stress. Oral hairy leukoplakia was found in one patient who also had AIDS.

The importance of this study, which evaluated the oral mucosa in patients with HZ, is the fact that the patients who sought consultation for cutaneous in-

volvement did not know whether they had oral involvement simultaneously or not. This clearly differs from other authors, who report that patients sought help especially for oral complaints.

RESUMO

Gonzaga HFS, Jorge MA, Gonzaga LHS, Barbosa CAA, Chaves MD. Estudo das alterações sistêmicas e bucais em pacientes brasileiros com herpes zoster cutâneo. *Braz Dent J* 2002;13(1):49-52.

O herpes zoster (HZ) é uma doença virótica causada pelo *Herpesvirus varicellae*. Este estudo foi realizado para determinar fatores que desencadeiam a doença, bem como alterações sistêmicas e bucais em pacientes com HZ. A amostra foi composta por 30 com HZ e 100 pacientes com outras doenças (Grupo controle - GC). Dos 30 pacientes com HZ, 13 eram do sexo masculino (43,3%) e 17 do sexo feminino (56,7%), com idades de 3 a 78 anos, média de 43,2. Os pacientes foram submetidos a exame clínico geral, dermatológico e bucal. Somente 50% dos pacientes com HZ referiram estresse emocional, durante o início da doença. Observou-se investigação positiva para HIV em 3,7% e para neoplasias malignas em 11,1% dos pacientes. As lesões no grupo HZ se localizavam no tórax (68,3%), face (20%), membros inferiores (10%) e membros superiores (6,7%). Comprometimento bucal específico pelo HZ não foi encontrado. A presença da doença pode indicar neoplasia maligna não diagnosticada e ou SIDA.

Unitermos: herpes zoster, viroses, boca.

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