

following exams were performed for all patients: laboratory tests, microbiological evaluation, hematological and immunological evaluation, brain MRI, brain TC, orthopantomography and handwrist radiography, in order to evaluate the effects of Wiskott-Aldrich syndrome on growth. Finally, a thorough oral examination was performed.

Results: Medical signs and symptoms such as recurrent infections, eczema, bleeding, thrombocytopenia, petechiae, ecchymosis, hemorrhagic diathesis, major bleeding were usually observed. The oral examination revealed gingivitis, periodontitis, aphthous lesions, gingival bleeding, oral petechiae and severe oral infections (caries, pulpitis, abscesses). In regard to othodontic aspects, a higher incidence of alterations in the physiological eruptive sequence with more cases of inclusions and transpositions was observed, probably due to untreated inflammatory and infectious processes. Infective processes affecting the permanent tooth may also result in malocclusion, which could possibly pave the way for future skeletal problems. Wiskott-Aldrich syndrome could also compromise and interfere with the orthodontic treatment which has the purpose of aligning teeth and solving skeletal issues.

**Conclusion:** Since Wiskott-Aldrich syndrome presents with a wide spectrum of symptoms and complications, it is mandatory to increase awareness of this entity and to apply a multidisciplinary approach that should include the dentist, in order to intercept any pathologies of the oral cavity and to improve patients' quality of life.

## Enrichment and characterization of cancer stem-like cells from an OSCC cell line

Arena C.\*, Dioguardi M.\*, Giannatempo G.\*, Capocasale G.\*\*, Mastrangelo F.\*, Lo Muzio L.\*

\*Department of Clinical and Experimental Medicine, University of Foggia, Foggia, Italy

\*\*Department of Surgical, Oncological and Oral Sciences, University of Palermo, Palermo, Italy.

Aim: Several recent studies showed that solid tumors contain a subpopulation of cancer stem cells (CSCs). CSCs play an important role in tumor initiation and progression and they are most likely the reason of cancer recurrence and metastasis. For further elucidation of the mechanism underlying the characteristics of CSCs, it is necessary to develop efficient culture systems to culture and expand CSCs. In this study, a nonadhesive culture system was used to generate spheres from the OSCC cell line, HSC-2. Subsequent investigations of their CSC properties, including colony formation capacity,

self-renewal potential, and cell invasion, were also performed.

Methods: A nonadhesive culture system was used to generate spheres from the HSC-2 cell line. The cell line was cultured in culture plastic wares with nonadhesive surface. 10 cm dish are made of nonadhesive for cells by coating with agarose thin films. Cells were plated at a density of 50000live cells/10 cm dish, and the culture medium was changed every other day until the sphere formation. Cell viability and migration were determined by MTT and wound healing assay.

**Results:** Spheres were formed cost-effectively and time-efficiently within 7-10 days. Moreover we proved that these spheres showed tumor initiating and self-renewal capabilities.

Conclusion: Typical tumor spheres appeared within 7-10 days. Compared to HSC-2 adherent cells, sphere cells showed a higher self-renewal and migration ability. Further studies will be performed to evaluate their tumorigenic ability in vivo and expression of stem cell specific markers (like OCT4, Sox2..) and drug resistance. Using this cost-effective and time-efficient culture system, a reliable model of enriching CSCs from OSCC cell line was established that can be used in cancer research.

## The malignant potential of oral lichen planus and oral lichenoid lesions: a systematic review

Lajolo Carlo\*, Gioco Gioele\*, Lo Muzio Lorenzo\*\*, D'Addona Antonio\*, Troiano Giuseppe\*\*, Michele Giuliani\*\*

\*Department of Oral Medicine, Oral Pathology and Oral Surgery, Catholic University of the Sacred Heart, Rome, Italy \*\*Department of Clinical and Experimental Medicine, University of Foggia, Foggia, Italy

Aim: Lichen Planus is a mucocutaneous inflammatory disorder which can affect either skin and/or mucous membrane; even if the etiology is still unknown, it accounts for an immune pathogenesis and affects from 0,5 to 2% of the studied population. Oral Lichen Planus (OLP) has been classified as a Potentially Malignant Disorder (PMD), nevertheless clinical and pathological diagnosis and its malignant transformation are still major points of debate. Aim of the present study is to perform a systematic review of the literature on the rate of transformation of OLP and OLL according to WHO or modified diagnostic criteria; furthermore clinical parameters predictive of transformation will be investigated. A secondary objective is to look for any evidence of a difference between OLP and OLL with regard to malignant transformation.

Methods: The systematic search and review processes