Dental Osteolyelitis

Newsletter 70 Road to Health
By Bonnie O'Sullivan

What is a Cavitat?

The Cavitat is a unique, patented, computerized 3-D, color imaging device that can be easily and quickly installed in a medical office and is capable of detecting and precisely measuring necrosis of the jawbone to aid medical professionals in diagnosing the debilitating effects of Bone Marrow Edema Syndrome, Neuralgia including Cavitational Osteonecrosis (NICO), Osteomyelitis and Periodontal Pockets of the Buccal Bone.

About Cavitations:

These lesions can and do produce debilitating toxins and are often located in old extraction sites and under or near the roots of root canal teeth, dead teeth and wisdom teeth. Sometimes the lesions spread extensively from these locations throughout the jawbone and may penetrate the sinuses or totally encompass the mandibular nerve.

In the last decade, the term "cavitation" has been used not only to describe those lesions appearing as empty holes, but also other types of lesions in the jawbone. These lesions have been found through tissue analysis to be ischemic (lacking in blood flow), necrotic (dead), osteomyelitic (bone-infected), gangrenous and therefore very toxic.

The latest scientific studies have proven these lesions to be highly neurotoxic (reference webite: www.altcorp.com/AffinityLaboratory/bacteriatox.htm). These toxins inhibit protein and enzyme absorption essential for all cellular functions contributing to or inducing systemic cellular disease.

The Cavitat — How it works:

The Cavitat is a stand-alone patented computer imaging system. When the Cavitat is used, sound waves are sent through the bone via a very small transducer, which is pressed against the outside of the cheek. It can also be held in place by the patient. On the opposite side of the bone (lingual) is a digitized array capable of interpreting the strength of the signal after it has passed through the bone. The ultrasound waves sent through the bone and picked up by the sensor on the opposite side of the bone can locate areas of bone loss or destruction, especially if

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there is a hollow space, such as is produced by a cavitation. Once the signal data is acquired, it is sent to the computer, which then converts it to a digital perspective 3-D color image. The scan produces no X-ray radiation and can be read and interpreted immediately.

The new Generation 4 Cavitat features a patented array mouthpiece, which is small, comfortable, easy to use and produces images with greatly enhanced resolution.

The Cavitat — What it does:

The Cavitat uses a customized ultasonic sound transducer and receiver to detect and measure bone marrow defects. It can identify such defects even in patients with little to no evidence of change in routine periapical and panographic dental radiographs.

The resolution on the Generation 4 has been increased 800% from the previous model producing a much clearer image and enabling detection of smaller holes in the jawbone. It is capable of detecting jawbone defects down to 1 millimeter in size.

Alternative Detection Methodologies:

Other methods for detecting necrotic lesions in the jawbone include the use of CAT scans and MRIs. These methods are neither practical nor cost effctive for use in the typical medical or dental office. They furthermore expose the patient to the adverse effects of radiation, provide only a 2-D perspective and require the interpretive services of a radiologist. In contrast, the Cavitat ultrasonograph raises the standard of care in imaging to a new level, adding an additional 60% of information never before available to the physician. When used adjunctively to a radiograph, it will provide the clinician with a full 98-100% of the information needed for an accurate clinical diagnosis.

This revolutionary device can be easily installed in a medical office, is effective and precise — yet much less costly than other alternatives. The new Generation 4 Cavitat is an extremely user-friendly adaptable device, which allows the operator to scan the entire jawbone quickly and thoroughly.

The Cavitat is the only FDA cleared imaging system for the alveolar process.

The Image:

The Cavitat provides a detailed 3-D image that is easily read and rotated to be viewed from all angles. The images are color coded to distinguish the intensity of

destruction:

- red — significant bone necrosis and loss
- yellow — moderate bone necrosis and loss
- green — no bone necrosis or loss

These images are detailed and identified as to orientation; i.e., B is for Buccal and D is for Distal. Also, mm measurement scales are provided. These ultrasonic images clearly identify necrotic lesions that have produced varying degrees of bone and marrow destruction.

Cavitat images have not been evaluated by the FDA as to normal bone or specific osseous pathology.

Investigative Data:

Independent, peer reviewed, published research with large numbers of humans has demonstrated a great effectiveness in identifying even small marrow defects in the jaws, whether produced by dental infections (periapical lesions) or ischemic damage. This investigation has found a large number of old extraction sites to be positive for cavitations (94%).

The Inventor:

The Cavitat was developed by Bob Jones of Aurora, Colorado. Bob suffered from an extremely severe, debilitating osteonecrosis of multiple sites in his jawbone. His was not, however, a pain producing case of maxillofacial osteonecrosis, but rather manifested as extreme fatigue, a very common "side effect" of such lesions.

Although the relationship between chronic fatigue and osteonecrosis is not entirely clear, there is evidence of a common underlying disease process involving a coagulation disorder, the consequence of the release of locally generated toxins or anti-myelin antibodies into the systemic circulation. Bob's symptoms subsided and his condition dramatically improved once his diseased marrow was removed.

For information regarding up-to-the-minute research on the relationship between osteonecrosis and some systemic diseases, please refer to the websites below:

cavitat — dentalhelp — clinemedical

Color Pictures of Dental Cavitations