ULTRASONOGRAPHY IN DENTISTRY

Dr Sumit Goel
Reader
Oral Medicine and Radiology
ULTRASOUND MACHINE

ULTRASOUND PROBE

ULTRASOUND GEL

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TRANSDUCER

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ECHOGENECITY

hyperechoic | hypoechoic

anechoic

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POSTERIOR ENHANCEMENT

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2D ULTRASOUND

3D ULTRASOUND

4D ULTRASOUND

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3D IMAGE OF A CYST

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TYPES

- COLOR DOPPLER
- POWER DOPPLER
- SPECTRAL DOPPLER

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ULTRASONOGRAPHY FOR VASCULAR LESIONS

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ULTRASONOGRAPHY FOR FINE NEEDLE ASPIRATION CYTOLOGY

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ULTRASONOGRAPHY IN SALIVARY GLANDS
ULTRASOUND OF TUMORS

WARHIN’S TUMOR

METASTASIS FROM MALIGNANT MELANOMA

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ULTRASONOGRAPHY TO DIFFERENTIATE REACTIVE AND MALIGNANT LYMPH NODES

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ULTRASONOGRAPHY IN TMJ DISC DISORDERS
ULTRASONOGRAPHY FOR INTRAOSSEOUS LESIONS

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Ultrasound of the same lesion showing no vascularity
ULTRASONOGRAPHY IN MASSETER MUSCLE HYPERTROPHY

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CONCLUSION

- WIDE APPLICATIONS
- ABILITY TO DESCRIBE A MASS
- ABILITY TO SHOW VASCULARITY
- REAL TIME IMAGING
IN SHORT

• NON INVASIVE
• NO RADIATION
• NO PREPARATION
• REPEATABLE
• REAL TIME
• AVAILABILITY
• COST EFFECTIVE
• SAFETY

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The Future of Ultrasound

- Transducer probes may get smaller, and more insertable probes will be developed to get better images of internal organs.

- Most likely, 3D ultrasound will be more highly developed and become more popular.

- The entire ultrasound machine will probably get smaller, perhaps even hand-held for use in the field.

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REFERENCES

- Sumer AP, Danaci M, Ozen Sandikei E. Ultrasonography and doppler ultrasonography in the evaluation of intraosseous lesions of the jaws. Dentomaxillofacial radiology 2009;38:23-27

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