

"Hey Doc, Why Do We Really Need to Take X-Rays?"

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In the practice of chiropractic, taking x-rays of the area(s) of chief complaint has become the current standard of care. However, performing any clinical procedure without an understanding or formulated rationale of that procedure may constitute malpractice. Many practitioners feel that x-rays are taken to establish the reason for treatment. Other practitioners believe that x-rays rule out pathologies that may prevent treatment. Unfortunately there is a small group of practitioners that use x-ray as a marketing ploy to persuade the patient to begin treatment. If you find yourself in any of the groups mentioned above, you have a dramatic misunderstanding of the clinical application of diagnostic radiology.

As practitioners we must first understand that x-ray is nothing more than a tool to help evaluate the patient. There is no magic when we order a series of x-rays of the area of chief complaint. Fundamentally, x-ray cannot compensate for a poor clinical examination. The proper application of x-ray will only enhance a good clinical examination. The fact is that a proper x-ray examination can only follow a good clinical evaluation. The x-ray study makes up a small portion of the complete patient examination but will never make up for an incomplete history and physical examination. X-rays can and will enhance the information gathered from your clinical examination.

What then is the rationale for exposing our patients to potentially harmful radiation? Diagnostic x-rays influence three distinct areas of patient care: diagnosis, prognosis, and treatment.

From a diagnostic standpoint, an x-ray series of the area of chief complaint must meet technical standards before any information can be gained. The imaging study then helps to confirm your working diagnosis. On the rare occasion, an unexpected finding may alter the patient's immediate clinical course, such as an abdominal aneurysm, lytic metastasis, or renal calculi.

The "prognostic" application of diagnostic imaging continues to lag behind that of the "diagnostic" application. The value of a standard x-ray study of the cervical spine with flexion and extension views, for example, can help in predicting the long term effect of an acute injury. If a vacuum cleft or widened disc space angle is demonstrated, there is objective evidence that marked soft tissue injury has occurred. The prognostic value of these findings requires knowledge of the regional soft tissue structures and the phases of healing and degeneration.

Imaging of the area of chief complaint may also affect the "treatment protocol" of the patient when excessive degeneration and foraminal narrowing is seen. Congenital variations such as transitional segments or block vertebra will also affect how we treat the patient. Treatment cannot be justified by any system of millimetric measurement or exotic radiographic views. Plain film radiography under no circumstances is precise enough to allow for comparative measurement of three dimensional objects converted to two dimensions. The more precise you attempt to be the more ludicrous the exercise

becomes.

In summary, if we are ordering x-rays studies for any other reason than the combination of diagnosis, prognosis, and treatment, we do not fully understand the possibilities and limitations of diagnostic imaging. When you are ordering your next radiographic study think "DPT," for diagnosis, prognosis and treatment. We must question anyone who would suggest exposing our patients to ionizing radiation for anything less. The next time a patient asks, "Are these x-rays really needed?" you can in good conscience tell them: "Absolutely, for reasons of diagnosis, prognosis and treatment."

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