

X-ray abdomen lateral view as a screening tool for detecting cases of peripheral vascular disease (PVD) in patients on hemodialysis

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Introduction: PVD is prevalent in patients on maintenance hemodialysis. Early detection helps in preventing the morbidity associated with it. Current study evaluates the role of x-ray abdomen lateral view as a screening tool for detecting PVD in hemodialysis patients.

Material and methods: The study sample consisted of 44 prevalent hemodialysis patients. Patients were diagnosed to have PVD if they had claudication, ischemic ulcers, lower limb amputation, revascularization or previous diagnosis of obstruction by ultrasonography or angiography and ankle brachial index (ABI) <0.9 or >1.4. All patients above 18 yrs. of age on thrice weekly maintenance hemodialysis for > 3 months were included, while those < 18 yrs. or bilateral lower limb amputations were excluded. Mean hemoglobin, serum albumin, total protein, calcium, phosphorus, intact PTH, alkaline phosphatase and urea reduction ratio (URR) were noted from time of initiation till December 2012. All patients underwent ABI study and X-ray abdomen lateral view.

Results: Out of 44 patients, 20 met inclusion criteria. 65% were male. Mean age was 58.6 yrs. 70% were diabetics while 90% were hypertensive. Average duration on hemodialysis was 10.7 months. 35% of patients had peripheral vascular disease. Average Hb was 9.3 gm%, serum calcium 8.46 mg/dl, phosphorus 4.8 mg/dl, iPTH 341 pg/ml, URR 62.15%, total protein 6.04 gm/dl, and albumin 3.08 gm/dl. 50% of patients were on calcium based phosphate binders. ABI was <0.9 in 25% while it was >1.4 in 10% of patients. X-ray spine showed aortic calcification in 50% of patients. One patient with amputation did not have calcification on x-ray but had positive ABI.

Conclusion: X-ray abdomen lateral view is a cheap and readily available screening tool for diagnosing PVD and needs to be evaluated on a larger scale for early detection and risk reduction in dialysis patients.

Biography

Pranaw Kumar Jha has completed his M.D. (internal medicine) and DNB (nephrology) in 2011. He is at present working as a consultant nephrologist in Department of nephrology and transplant medicine at Medanta hospital, India. He has publications in reputed national and international journals to his credit.

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