Avascular necrosis may occur in several bones, especially at the femoral head. The exact etiology is still unknown. Major trauma and non-traumatic factors play important roles. Early detection is the most crucial factor of disease progression. Radiography, bone scintigraphy, and MR images are available for detection of early bone collapse. MR images and bone SPECT are highly sensitive tools. We report a young female who suffered left groin pain for months. Core decompression procedure with bone graft was performed under the diagnosis of idiopathic femoral head osteonecrosis, Ficat stage IIB. Bone scintigraphy after surgery revealed linear increased tracer at the femoral neck and intertrochanteric region, precisely the area where the core decompression procedure was performed. We suggest that the viability of a bone graft can be evaluated by bone scintigraphy.

**Key words:** osteonecrosis, femoral head, core decompression