In particular, end stage renal disease patients are the most commonly affected. Other at risk groups include females and patients with a hypercoaguable state.

A small study was recently released that suggested that an initial intervention such as topical sodium thiosulfate may be beneficial in the treatment of calciphylaxis.

However, Hafner et al reported that a significant number of calciphylaxis patients had malnutrition and malabsorption syndromes. In addition, the study found that a significant number of patients had a history of smoking, obesity, and diabetes.

The former is found in thigh and abdominal areas and is associated with a poor prognosis compared to the latter which involves the digits.

The challenge in diagnosis of calciphylaxis is that it is clinically difficult to differentiate from gangrene caused by typical peripheral vascular disease. The lesions commonly manifest similarly to systemic vasculitis beginning with ischemic appearing changes and skin necrosis which evolves into non-healing ulcers with irregular margins.

In order to fully pursue calciphylaxis a complete workup is necessary. This consists of biochemical investigation for hyperparathyroidism including PTH, serum calcium, and phosphate.

Howe Tissue biopsies of the necrotic areas are also recommended to look for histological changes within the vasculature.

Treatment of calciphylaxis is aimed at correcting the biochemical imbalances through low phosphate diets, phosphate binders, and dialysis with low calcium baths.

Aggressive wound care is also extremely important as a secondary complication of calciphylaxis associated gangrene may cause infection and sepsis. Hyperbarics has also been found to be an effective means of treatment.

Most importantly, the use of corticosteroids should be avoided as these can worsen the disease process.

A small study was recently released that suggested that an infusion of sodium thiosulfate solution three times weekly may be a successful form of treatment.

**Conclusion**

Gangrene is most often the result of peripheral vascular disease or complications related to diabetes or renal disease. It is important to recognize that there are occasions in which gangrenous changes can result from other disease processes. Patient presentation with an unusual onset or atypical symptoms should be worked up for one of these less common etiologies to ensure proper treatment is instituted without delay to decrease the chance of less favorable outcomes.

**References**