

The Creatinine Triples After a Whipple: A Case of Chronic Kidney Disease Due to Secondary Oxalate Nephropathy 27 Years Post-Pancreaticoduodenectomy

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Disclosure: The authors have declared no conflicts of interest.

Keywords: Case report, chronic kidney disease, oxalate nephropathy, pancreaticoduodenectomy, Whipple's procedure.

Citation: EMJ Nephrol. 2025;13[1]:33-34.
<https://doi.org/10.33590/emjnephrol/FEIQ9670>

BACKGROUND

Roux-en-Y gastric bypass and chronic pancreatitis are recognised causes of oxalate nephropathy secondary to fat malabsorption.¹ Whipple's procedure is a lesser-known cause of oxalate nephropathy, and there is only one other reported case to this date.²

CASE PRESENTATION

The authors present the case of a 55-year-old female with a background of Type 2 diabetes, hypertension, and Whipple's procedure performed 27 years prior for a benign pancreatic cyst.³ The patient presented with a 4-week history of abdominal pain, back pain, and weight loss, and an incidental finding of rapidly declining renal function that had been occurring over a period of 1.5 years. Her creatinine levels had increased from 66 µmol/L in February 2023, to 103 µmol/L in November 2023, to 194 µmol/L at the time

of this encounter ([Table 1](#)). She denied using nonsteroidal anti-inflammatory drugs. Metformin had been discontinued a month prior by her general practitioner due to impaired renal function.

A urine dipstick test was performed; the result was unremarkable and revealed no active urinary sediments. The patient's urine creatinine level was 6.3 mmol/L, her urine albumin was 5.1 mg/L, and the urine albumin to creatinine ratio was 0.8 mg/mmol. Full myeloma and autoimmune panels were negative. A renal biopsy demonstrated multiple intra-tubular oxalate crystals with moderate tubulointerstitial atrophy and glomerular basement membrane thickening suggestive of diabetic glomerulopathy ([Figure 1](#)). Total oxalate excretion over 24 hours was 899 µmol. Faecal elastase was <15 µg/g, indicating severe exocrine pancreatic insufficiency. The patient was diagnosed with chronic kidney disease due to secondary oxalate nephropathy, 27 years after her Whipple's procedure. She remains under follow-up, with the mainstay of treatment being hydration, pancreatic enzyme replacement therapy, and a low oxalate diet.

CONCLUSION

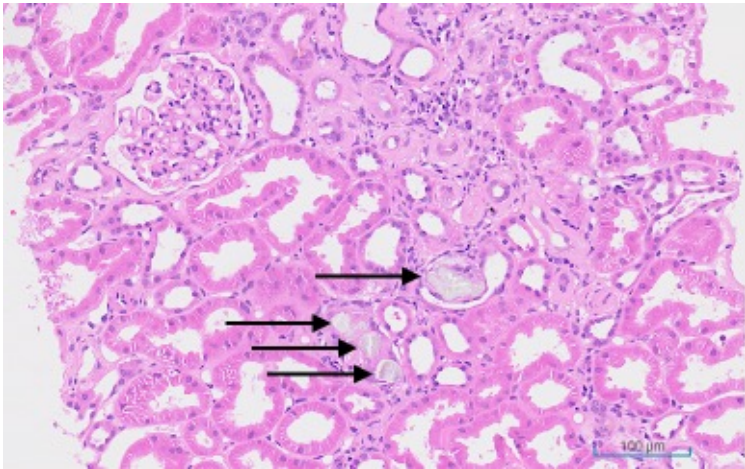
Through this unusual case, the authors aim to raise awareness of Whipple's procedure being a cause of oxalate nephropathy and highlight the possibility of chronic kidney disease occurring decades after the operation.

Table 1: Rapid decline in renal function over 1.5 years.

	Serum creatinine ($\mu\text{mol/L}$)	eGFR (mL/min/1.73 m^2)
February 2023	66	91
November 2023	103	53
August 2024	194	25

eGFR: estimated glomerular filtration rate.

Figure 1: Renal histology.



The sample shows multiple intra-tubular oxalate crystals (black arrows) with adjacent tubular atrophy.

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