in the ED the nurse expressed shock at the speed and volume exited once the cath was placed.

The nurse was reacting to a **high-pressure, overfilled bladder emptying through an open catheter.** That observation does not fit a story of "you just drink a lot, and the kidneys are fine."

What that exit means

Urine only jets out like that if the bladder is both very full and under substantial pressure when the catheter opens the outlet. A normal resting bladder, or a large but low-pressure bladder that has been draining on its own, does not produce a stream fast enough to startle an emergency nurse.

That matches what you described earlier: hundreds of millilitres in a few seconds through a 20 Fr catheter. The average pressure needed to drive that flow is on the order of **50–90 mmHg**, far above a normal resting bladder pressure of about **4–11 mmHg**. The peak at the moment of insertion was likely higher, then fell as the bladder emptied.

No hydronephrosis on a later ultrasound does not cancel this. Kidney swelling is a sign of **sustained** back-pressure. A pressure spike at the moment of catheterization, or during Credé, can be high enough to empty violently and still not leave swollen kidneys on a scan. About half of high-pressure chronic retention cases never show upper-tract dilatation.[1]

What to watch for after that drainage

Rapid decompression of a chronically distended bladder can cause:

- **Hematuria**, from a stretched, fragile bladder lining. It is common and usually settles, but heavy bleeding, clots, or inability to drain needs urgent reassessment.[2] [3]
- **Post-obstructive diuresis**, meaning urine output stays very high after the blockage is relieved. Concerning output is about **200 mL/hour for 2 hours**, or more than about **3 litres in 24 hours**, especially if you become dizzy, thirsty, weak, or light-headed. That is more likely after an immediate drainage of **1500 mL or more.**[4]
- A drop in blood pressure. Most drops are mild, but fainting or persistent dizziness is not.[5]

Current evidence says rapid complete drainage is generally as safe as clamping the catheter, so the nurse's shock is about the pressure and volume, not proof that the ED did the drainage wrong.[6] [5]

How this should be written in the chart

Ask that the ED note, if it is not already there, state that urine exited under high pressure and in large volume immediately on catheterization, and that the nurse commented on the speed. That sentence is direct evidence of elevated intravesical pressure. It should sit next to the later note about high intake and no hydronephrosis, because those findings answer a different question: whether the kidneys were swollen that day, not whether the bladder was under high pressure when it was finally drained.

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1. https://tau.amegroups.org/article/view/14668/html
2. https://pmc.ncbi.nlm.nih.gov/articles/PMC5965244/
3. https://pmc.ncbi.nlm.nih.gov/articles/PMC9846865/
4. https://www.ncbi.nlm.nih.gov/sites/books/NBK459387/
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6. https://pmc.ncbi.nlm.nih.gov/articles/PMC11879703/
7. https://www.urologysanantonio.com/urinary-retention/
8. https://www.urologynews.uk.com/features/features/post/a-guide-for-the-assessment-and-management-of-post-obstructive-diuresis
9. https://mdsearchlight.com/kidney-health/postobstructive-diuresis/
10. https://www.academia.edu/73445650/Investigating_chronic_urinary_retention
11. https://bphcanada.com/urinary-retention/
12. https://www.convatec.com/continence-care/for-healthcare-professionals/urinary-retention-introduction/
13. https://traumacare.gr/en/blog/p/47-urinary-retention-causes-which-catheter-is-right
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16. https://www.nuh.com.sg/health-resources/diseases-and-conditions/voiding-difficulty