Case 341

4. Urinary bladder leakage

【Progress】

Urinary balloon tube was inserted to urinary bladder, dramatically inducing pain relief. Several days later, endoscopically surgery revealed leakage from urinary bladder diverticulum and surgical repair was conducted for urinary bladder perforation (Fig. 3).

【Discussion】

Intra urinary tract hyper pressure causes urinary incontinence, urinary bladder diverticulum, urinoma, and urinary bladder rupture.

Urinary incontinence occurs in either situation of intra urinary bladder pressure elevation plus weakness of constrictive strength or involuntary constriction of urinary bladder prior to urethral stricture. Prostatic hypertrophy occasionally gives rise to involuntary constriction of urinary bladder, inducing urinary incontinence.

Urinary bladder diverticulum occurs in an acquired situation. The mural of diverticulum is deficient of muscle layer, indicative of being composed of mucosa and submucosal layers. The urinary bladder diverticulum tends to occur at the transposition between ureter and urinary bladder. This portion is vulnerable to elevation of intra bladder pressure, inducing to make urinary bladder diverticulum.

Urinoma is a cystic lesion containing urine protruded outside from urinary tract. It occurs under a situation of intra urinary tract pressure elevation such as ureter stone, trauma, retroperitoneal fibrosis and urinary bladder cancer. It often develops in retroperitoneal space.

Urine bladder tear or rupture brings about leakage of urine followed by retention of peritoneal fluid, extraperitoneal fluids or both. The urinary bladder rupture is caused by trauma, medical procedure, or spontaneous (1-7). The incidence of spontaneous urinary bladder rupture is less than 1% (1). The symptoms of intraperitoneal bladder rupture vary, while those of extraperitoneal bladder rupture are mainly abdominal pain, mimic acute abdomen (1-6). In our patient, he experienced severe abdominal pain in prone position or after urination but dramatically pain relief in supine position. This is probably intraperitoneal pressure after urinary bladder rupture makes urinary bladder further stress, causing severe abdominal pain.

Managements for urinary bladder leakage are as follows; in either case of small urine leakage from urinary tract or low-grade traumatic urinary injury, conservative treatment is served; in case of relatively large volume urine leakage or formation of urinoma, drainage catheter inserted directly to urinoma percutaneously, per renal approach, or per urinary bladder, and ureter stent: in case of large volume urine leakage, surgical resection is served (2-7).

In our case, urine leakage from urinary bladder diverticulum occurred spontaneously, causing intense pain after urination or supine position, mimicking ileus. Abdomen CT showed fluids retention in peritoneal space. He received in-dwelling urethral catheter, inducing to decrease intra urinary tract pressure, leading dramatically pain relief.

【Summary】

We presented an eighty-three-year-old male presented for being scheduled for inguinal hernia. At admission, he experienced tense pain after urination. CT showed urinary bladder perforation. It is borne in mind that urinary rupture causes abdominal pain after urination and/or in prone position. Intra urinary hyper pressure causes urine incontinence, urinary bladder diverticulum, urinoma or urinary bladder rupture. The treatment of decreasing intra urinary bladder hypertension such as in-dwelling urethral catheter brings about remarkably effective for pain relief.

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