Urinary Incontinence

1. Urge incontinence

A. Caused by detrusor over-activity
B. Treated with:
    i. Bladder training of frequent voluntary voiding
    ii. Anticholinergics:
        1. Oxybutynin – Ditropan (immediate release, XL and patch form)
            a. Antispasmotic effects
            b. High rate of dry mouth 80%
            c. CNS penetration and CNS side effects
        2. Tolteridine – Detrol (immediate release and LA)
            a. No antispasmotic effects
            b. Lower rate of dry mouth 40% than Oxybutinin
            c. Less CNS penetration and CNS side effects compared to Oxybutynin

2. Stress incontinence

A. Caused by failure of sphincter to remain closed during bladder filling
B. Treated with:
    i. Pelvic muscle exercises: Kegel exercises; pessiaries
    ii. Alpha 1 agonists: Pseudoephedrine
    iii. Topical estrogen therapy – for atrophic vaginitis

3. Mixed Urge and Stress Incontinence

A. Combination of 1 and 2
B. Treated with medications for the most dominant type of urinary incontinence (see above)

4. Overflow incontinence

A. Caused by impaired detrusor contractility and/or bladder outlet obstruction
B. Treated with;
    i. Prazosin, Terazosin, Doxasosin, Tamsulosin, Alfuzosin
    ii. Catheterization

Medications that can aggravate or unmask the above causes of urinary incontinence:

1) **Potent fast-acting diuretics** – furosemide

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2) **Sedative hypnotics, neuroleptics**
    a. Benzodiazapines (Diazapam, Alprazolam, etc…)
    b. TCAs (Amitryptaline)
3) **Muscle relaxers**
    a. Cyclobenzaprine
4) **Alpha 1 agonists** – pseudoephedrine
5) **Alpha 1 antagonists** – terazosin, prazosin
6) **Anticholinergics**
    a. TCAs (Amitriptyline)
    b. Diphenhydramine
7) **Calcium channel blockers**
    a. Diltiazem
    b. Verapamil

Note: The drugs used to treat urinary incontinence can also make the problem worse if the patient isn't properly diagnosed or if they have a mixed form.