**Women’s and Men’s Health Case Studies**

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The health care of women and men needs customized evaluation because it demands detailed comprehension of drug behavior along with its effects on individuals who differ according to biological characteristics and medical backgrounds. Healthcare management success relies on evidence-based practice implementation to create safe treatments that meet individual patient needs. This analysis studies four different cases starting with a pregnant woman who has a urinary tract infection, followed by a young woman diagnosed with vaginal candidiasis, then an elderly male experiencing mild COVID-19, and finally, a woman with polycystic ovary syndrome who is planning a pregnancy. This context uses case data to emphasize that personalized therapy combined with ongoing monitoring alongside patient education produces optimal health results.

**Pregnant Patient with UTI**

At her 20-week gestation, RT, the pregnant woman experiences symptoms of urinary tract infection with painful urination, an urgent need to use the bathroom, and feelings of tiredness. Doxycycline 100 mg BID prescribed for seven days poses risks to fetal development making it unacceptable for pregnant patients (Manoharan et al., 2023). Amoxicillin 500 mg PO TID administered for seven days presents a safe pregnancy-compatible therapy against common UTI bacteria, including Escherichia coli (Radu et al., 2023). Pregnant patients require dosage adjustments because their elevated blood plasma volume causes dilution of medications in their bloodstream.

The success of treatment and prevention from recurrence depends heavily on patient education. RT needs to take all prescribed antibiotics completely from start to finish regardless of early symptom improvement because preventing bacterial resistance is critical. Daily hydration targets the elimination of urinary tract bacteria, while the patient needs to watch for symptom deterioration indicators through heightened fever and persistent pain. Medical education must teach patients to report both newly occurring and other worrying side effects. Patients are required to have their urine culture checked post-treatment to verify their infection has been cured (Rogers et al., 2023). The urinary tract guidelines suggest amoxicillin as a suitable treatment option because RT has normal kidney function without allergy reactions. Teamwork between the physician and patient will lead to completing UTI treatment without endangering her pregnancy.

**Scenario 2: Vaginal Infection**

At 21 years old, GP develops symptoms matching those of vulvovaginal candidiasis through thick white, odorless vaginal discharge and vaginal itching, which persisted for three days. The patient engaged in unprotected sexual encounters with a new partner and has documented sulfa allergy, but this allergy condition does not affect her treatment plan. A single dose of fluconazole 150 mg PO provided orally serves as the first-choice therapy for standard cases of this condition (Hoenigl et al., 2024). The medicine provides black yeast infection treatment through a single-dose administration, which combines efficacy for Candida albicans infections with universal patient compliance. Fluconazole demonstrates robust tolerability and thus establishes itself as a suitable therapy for GP’s disease management.

Effective treatment alongside the prevention of relapse depends strongly on educational efforts aimed at patients. GP must remain abstinent from sexual activity through treatment and seven days after resolving symptoms to avoid reinfections. Clinical guidance includes teaching patients to practice appropriate genital hygiene through a selection of scented-free products and choosing cotton underwear to stop fungal growth (Hildebrand et al., 2024). STIs and future infections can be minimized by practicing safe sex with condoms. Therefore, the patient needs proper education about these practices.

GP risks adverse side effects because of potential interactions occurring between fluconazole and her present medication, alprazolam. The combination of fluconazole with cytochrome P450 enzyme blockade has been shown to elevate alprazolam levels through a pathway that produces increased sedation effects (Dołoto et al., 2024). Doctors should either postpone alprazolam use for 48 hours following fluconazole or exercise careful use with drowsiness monitoring. The combined approach of treatment with patient guidance and drug risk assessment makes it possible to quickly manage GP’s symptoms and establish preventive measures and reproductive health strategies simultaneously.

**Scenario 3: COVID-19 Positive Patient**

The patient LW, who is 66 years of age, shows moderate COVID-19 symptoms comprised of persistent exhaustion, confusion, fever and an average body temperature along with throat discomfort. His clear chest X-ray, alongside an oxygen saturation reading of 96%, demonstrates pneumonia and severe disease is absent. His treatment approach focuses on relieving symptoms because his condition won't require hospital admission or complex treatments. Acetaminophen 500 mg PO every 6 hours as needed provides recommended relief of fever and discomfort, but patients must stay below 3000 mg per day (Hammad et al., 2023). The usage of acetaminophen by older adults offers both safety and efficacy, together with minimal product risks or side effects.

Proper COVID-19 home management requires comprehensive education for patients. LW needs to use CDC-approved techniques of proper isolation to stop virus dispersal, especially for family members and persons in susceptible groups. Testing, proper hydration, and sufficient rest, together with following a balanced diet, represent the best approach for strengthening the immune system (Yuniarti & Trisnadi, 2022). A portable ECG is the first tool that patients should use to check symptoms of deteriorating disease, such as high fever, respiratory issues, and chest discomfort, and these need instant medical care.

LW needs to stay off alcohol consumption because he needs to inform his healthcare provider about including or using all OTC and prescription drugs. Liver damage poses elevated risks when taking acetaminophen under conditions of alcohol consumption or when using hepatotoxic agents (Gabrielli et., 2022). Medical monitoring through oxygen saturation checks, together with ongoing assessment of respiratory symptoms, requires follow-up medical appointments to track patient recovery. The established supportive care plan manages LW's existing symptoms but focuses additionally on prevention measures alongside safety means that monitor any progressive disease deterioration.

**PCOS Patient Trying to Conceive**

The 35-year-old patient FS has PCOS, yet she continues efforts to become pregnant. The test results show microcytic hypochromic anemia through the examination of low mean corpuscular volume (MCV) along with mean corpuscular hemoglobin concentration (MCHC) and ferritin values (Balraj & Hinge, 2023). Iron deficiency anemia leads to energy level decline and fertility issues, according to laboratory results. Iron deficiency treatment requires ferrous sulfate (325 mg PO) to be administered once per day to restore iron levels in the body. Patients should combine their iron supplementation with vitamin C through orange juice for better absorption. Successful conception depends on addressing anemia because inadequate blood oxygen delivery through reproductive tissues from iron deficiency makes conception less likely to happen.

The ongoing treatment for FS involves metformin 500 mg taken twice a day by mouth. Patients taking metformin experience improved insulin sensitivity because PCOS frequently involves insulin resistance (Zhao et al., 2023). The body's insulin response improves when you take metformin; therefore, the medication helps control menstrual cycles and supports ovulation while lowering androgen levels. FS requires this medication as an essential treatment in her management framework. A key part of maximizing FS's conception potential requires both the PCOS management benefits of metformin and specific ovulation induction therapy. The five-day treatment period with clomiphene citrate 50 mg daily leads to ovarian egg releases through stimulation.

Passive education of patients remains vital since it promotes both treatment plan compliance and reduces treatment-related anxieties. The healthcare provider should teach FS to combine ferrous sulfate with food consumption as it decreases the risks of gastrointestinal side effects, including nausea and constipation (Saleh et al., 2025). The patient should consume food-based iron sources of red meat along with beans and dark leafy greens as part of her meals. When providing information about clomiphene citrate, the nurse must educate FS about the side effects, which can include mood swings, hot flashes and bloating. FS should learn to track their ovulation indicators using basal body temperature readings and cervical mucus patterns so they can have the best timing for intercourse that leads to pregnancy.

**Conclusion**

Pharmacological treatment for women’s and men’s health demands individualized therapeutic plans that consider patient-specific characteristics such as age, gender status, and pregnancy state together with any comorbidities. A complete analysis of four specific medical situations illustrates how optimized therapeutic results depend on pharmacokinetic and pharmacodynamic knowledge combined with individual patient requirements. The cases show how individual patient characteristics must guide therapies and train patients through proper monitoring and educational support when treating UTIs in pregnancy along with PCOS-related infertility. These case studies show that successful healthcare provides fixation of current health issues and delivers enduring tools and information that help patients maintain better long-term wellness alongside improved health results through collaborative practice.

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