Refining the Optimal First Treatment for Pediatric Breast Abscesses

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IRB Number: 17120711

Describe role of Submitting/Presenting Trainee in this project (limit 150 words):

Kayla Briggs was responsible for project design, data collection, data analysis, and abstract preparation.

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background: We previously reported treatment and outcomes of children with untreated, not spontaneously draining (UTND) breast abscesses. What has not been well defined however are those with previously treated, not spontaneously draining (PTND) pediatric breast abscesses. In general, a more conservative approach is favored in children with breast abscesses to avoid damage to the developing breast bud.

Objectives/Goal: We sought to determine if care at a pediatric tertiary referral center impacts disease persistence rate.

Methods/Design: Following IRB approval, patients <18 years old with breast abscesses treated at a large tertiary referral center from January 2008-December 2018 were included. Patients were stratified into UTND or PTND. Primary outcome was persistent disease requiring further treatment. Secondary outcomes included need for escalation of therapy.

Results: In all, 114 patients met inclusion criteria, 96 in the UTND group and 18 in the PTND group (Figure 1). Baseline demographics, including abscess size, were similar. Patients previously treated at other hospitals (OSH) were more likely to use antibiotics alone as primary therapy compared to more invasive measures, like incision and drainage and needle aspiration (100% vs. 47%, p=<0.001). At our facility, 11 of 18 (61%) children treated first at OSHs with antibiotics alone required treatment for persistent disease (73% needle aspiration, 27% incision and drainage). Persistent disease after antibiotic treatment alone was higher when patients were first treated at an OSH (61% vs. 18%, p=0.001), where

trimethoprim-sulfamethoxazole (50%) was the most common treatment, compared to our facility, which most commonly prescribed clindamycin (71%, p=<0.01). Seven children treated with antibiotics alone at an OSH first required a change in antibiotic therapy (100% to clindamycin), of which none suffered persistent disease. Once treated at our facility, the rate of persistent disease in those treated with antibiotics alone was not different between the groups (11% vs. 11%, p=0.9).

Conclusions: Antibiotic therapy, when properly chosen, remains a safe first-line treatment of pediatric breast abscesses.