AFPI Karnataka Newsletter

Academy of Family Physicians of India

Issue: Volume 4, Issue 3

Lessons from Home-Based Care for a Patient with Acute Febrile Illness during the Pandemic

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The first author woke up to see a missed call from a friend and colleague one morning in September. A concerned home visit led to an eventful couple of weeks. Between uncertainty of diagnosis and challenges of home based management, in the backdrop of the pandemic, this article discusses some key lesssons the authors learnt.

Presentation

27 year old female professional, when seen at her home on the first visit, was on the 4th day of continuous fever associated with chills. Along with generalized body pain and tiredness, she also complained of a pain in the right shoulder. In the wee hours of the day of visit, she had 2 episodes of vomiting (which is what prompted her to call the first author). She had been prescribed Ofloxacin tablets 2 days ago by a doctor in the nearby hospital.

She is affected by Type 1 Diabetes Mellitus from school years and uses continuous subcutaneous insulin infusion which she is comfortable with. She is also on Levothyroxine 50mcg for hypothyroidism.

She had had 2 episodes of UTI in the previous year treated with antibiotics on an out-patient basis, and yet another episode earlier this year treated with IV antibiotics.

On examination she looked stable, yet tired and dehydrated. Pulse rate was 110 bpm, BP - 120/70mmHg, RR - 18 cpm, temperature - 100 F. SPO2 was 98% (checked every day and remained stable) There were no rashes. Her blood sugar monitor read 210 mg/dL.

She had normal breath sounds on auscultation of the chest. Her abdomen was soft and non-tender.

Lifting the right shoulder gave her pain.

At this point, the differentials we made were - Dengue fever, Flu, UTI, Acute Cholecystitis, possibly complicated by diabetic ketoacidosis. We had to have COVID-19 in the list as well.

We let her continue the antibiotic and prescribed Pantoprazole 40mg + Domperidone 10mg OD, Ondansetron 4mg SOS and T. Paracetamol 650mg SOS for symptomatic management. Advised lots of fluids (the first author brought bottled tender coconut water); to eat food as much as possible (even if very little, and bland if it helps); and to do tepid sponging if fever was too high.

CBC, urine routine, Dengue NS1, IgG and IgM tests were asked for and she managed to get the sample drawn at home through a popular laboratory chain.

On the next day (day 5 of fever) she looked better. But she had had high fever spikes in the night (104 F). Although there wasn't any vomiting, appetite hadn't improved.

By noon, some of the test reports had come. Hb was 10.6g%, total WBC count - 14,870 cells/mm^3 with 80% nuetrophils. Platelet count was 2,64,000/mm^3. Ketone bodies and sugar were present in the urine, but there were no pus cells. Blood sugars were in the 250+ range.

Dengue test results were pending.

We were unsure whether the etiology would be bacterial or viral.

There were concerns regarding the need for different antibiotics and the need for hospital admission due to the continuing high grade fever, blood sugar being high, as well as high WBC count.

We asked her to increase her insulin doses to get better sugar control and to keep herself well hydrated.

That evening the dengue report came in negative.

On day 6 the fever continued. She was better in the morning, but was finding the evenings worse with high fever, body aches, tiredness, and occasional vomiting.

On close examination, there was mild tenderness in the right hypochondriac region. With the right shoulder pain continuing, we had to keep acute cholecystitis high on the list of differentials.

Closing in on a week of fever, and with no clear diagnosis, we made phone calls to senior family physicans and an infectious diseases specialist at a teaching hopsital. After the discussions, we asked for a USG abdomen and pelvis, LFT, Serum Creatinine, Serum Electrolytes, and a Chest X-ray. But it was a weekend and the tests couldn't be done at home.

On that Saturday night when high fever continued, in view of high total leukocyte count, we started her on Ceftriaxone and Metronidazole for possible acute cholecystitis.

On the morning of day 7 she was feeling better again. The tests were done and were all normal. The ultrasound scan was normal as well. And we were back to "What are we treating?". Our only solace was that her appetite was back and the temperature wasn't as high. We had ruled out the serious conditions.

There was a step ladder pattern to the fever and we revised our diagnosis to possible salmonella typhi or paratyphi infection. We thus stopped Metronidazole and continued Ceftriaxone. Meanwhile also sent for Typhidot IgM and Malaria antigen tests both of which turned out to be negative.

She had fever till day 10 and then became afebrile. We continued Ceftrixaone IV for 5 days and then switched over to Cefixime for 7 days, along with Azithromycin for 7 days. She was doing well at the end of the second week.

Discussion

Through the above diagnostic and therapeutic journey, the authors reflect on the following key elements that go into person centric primary care practice.

Dealing with uncertainties

More often than not in family practice we are unable to pin-point our diagnosis with absolute precision. It is easy to get caught up in a rush to get to the right diagnosis. This often puts a lot of pressure on both the doctor and the patient without much to gain. In such circumstances one need to ask think about the necessity of an accurate diagnosis in decisions about management. If the management doesn't drastically change with a better diagnosis, it is alright to accept the uncertainty inherent in such situations and focus on alleviating other issues. Sometimes it might require one to over-treat than under-treat in situations where a serious medical condition cannot be ruled out.

At times like these, discussing with patient and their family to keep them informed and also to assure them of not missing a serious condition becomes important. For this patient, the authors tried to follow these principles at each point in the care pathway.

Shared decision making

There are numerous decisions to be made in such a situation many of which might have non-trivial consequences. Decisions like home-based care vs hospital-based care, starting IV antibiotics, investigations including testing for COVID-19.

It becomes important to involve the patient with adequate information to take contextually appropriate measures rather than a one size fits all approach.

Sharing responsibility and risks in this manner helps make patient care the team sport that it is. Not having to shoulder all of the responsibility helps the physician to avoid practising defensive medicine. In the same way, the patient builds a sense of

responsibilty and trust that helps the therapeutic process.

Hospital admission vs home care

In the above scenario, due to the pandemic there was fear among both the physicians and the patient and family about the quality of care, cost of care, and the risks that comes with hospitalization.

But caring for a person at home, in the context of an uncertain diagnosis and presence of comorbidities, with management of intravenous medications, can be intensive - not just on the skills, but also emotionally.

Strategies that can help in such situations include:

1. Having a backup team for continuity of care. Here, the clinical and moral support of senior physicians and the willingness of infectious diseases specialist to admit if required gave confidence to the treating physicians.
2. Having periodic conversations about what is worrying for the patient and the physician. Being clear about possible scenarios and having a plan to deal with all of them.