

Original Research Article

Urology outpatient clinic management amidst the lockdown during COVID-19 pandemic: a disease-specific strategy

Abstract

Background/ Purpose: Humanity is crippled by an invisible enemy COVID-19, pandemic. The preparedness of the medical fraternity was taken by surprise. Medical priorities changed overnight. The urology department of UMMC (University of Malaya Medical Centre, Kuala Lumpur), the oldest tertiary academic centre in Malaysia, suspended all its time-honoured clinical activities to assist in the frontlines of COVID-19.

Methods/ results: The out-patient urology clinics are deferred to comply with the national and hospital prerogative of Movement Control Order (MCO). We offer a strategy from a urological standpoint for triaging the out-patient system for maintaining reserve of health care workers while balancing patient outcomes.

Conclusion: This strategy will give clinical units a guide to avoid unwanted displeasure among doctors and patients. A dedicated team led by a senior member of the team is crucial in ensuring smooth delegation of duties and proper documentation of all actions taken with regards to patient management.

Keywords: Urology, Clinic Triaging, COVID-19, **Healthcare Management**

Introduction

COVID-19 presents an unprecedented challenge to health care services since the announcement by World Health Organization (WHO) as a pandemic on 30th January 2020 [1]. Reported cases worldwide **have** passed 3 million cases and mortality of 211,788 cases. As of 27th April 2020, Malaysia has 5820 reported cases with 99 mortality **cases [2]. As** a result, the Malaysian Government enforced the First Movement Control Order (MCO) starting from 18th March 2020 which was further extended to 12th May 2020. This drastic measure, although needed, has played havoc to the outpatient clinic management.

Overcrowding in hospital lobby or clinic waiting area while awaiting consultation in an active clinic environment violates the principle of social distancing being advocated as one of the primary methods of preventing an infection [3]. This is a potential risk of exposure to both patients and health care personnel. University Malaya Medical Centre (UMMC), Kuala Lumpur is one of the 35 public hospitals designated as a COVID-19 hospital in Malaysia and has taken early initiatives to manage the clinic rescheduling.

One of the methods employed is the blanket rescheduling of appointments to **3 or** 6 months which could stir multiple issues like delay in cancer patient management. This also leads to future clinics being overwhelmed and loss of patient centred management. Thus far, there are guidelines available for rescheduling of urological elective surgeries during a pandemic [4]. However, a standard framework of triaging outpatient urology clinic patients remains a grey area. In order to maintain the integrity of urology clinic and doctor-patient relationship, a triaging strategy has been implemented at UMMC during this time of crisis. The aim of this project is to report our urology clinic triaging strategy and outcome in balancing the MCO and patient's welfare and anxiety.

Materials and methods

Outpatient urology clinic management

This was a descriptive study undertaken in UMMC, Kuala Lumpur, during the peak of COVID-19 pandemic, coinciding with movement conditional order (MCO) and closure of all elective services. The study period was from the 18 March 2020 until 17 April 2020 following the national quarantine and cordon sanitaire measures implemented by the federal government of Malaysia in response to the COVID-19 pandemic [5]. We devised a standard protocol to ensure uniformity in our instructions to all colleagues and clinic staff that could be used as a template for clinic management during the pandemic.

As a short-term measure, the hospital administration sent out letters and text messages (SMS) to patients and arrangements were made to collect their medications at the pharmacy directly without consultation. The reach of these information could not be confirmed. We expected patients to turn up despite these measures albeit reduced in number. Doctors were delegated to provide consultation to patients who turned up. Patients seen in outpatient clinic followed strict hospital regulations of social distancing, hand hygiene and one-to-one consultation in the consultation room.

In the first phase of MCO, a dedicated team was assigned to vet through the patient records. This enabled development of a standard protocol for subsequent MCOs to ease the workflow. Access to electronic medical records (EMR) were obtained from the hospital authorities.

We assessed and stratified all the patients into 5 main urological conditions (i.e. uro-oncology cases, urolithiasis, lower urinary tract symptoms, andrology and functional urology). The flowchart below shows the initial phase of the project (Fig 1). This was a retrospective review of data obtained from the clinic registry. Descriptive statistics are presented for the case-mix of our patient cohorts and the number of patients who turned up despite the rescheduling process.

Results and discussion

Rescheduling Protocol according to case-mix and urgency

It was noted that the case mix of patients stratified into different urological conditions required rescheduling according to urgency of the case. The triaging team, led by a senior urologist, followed strict protocol while assessing the EMR to classify each patient according to the time of appointment to be given; see as scheduled, 3 months, 6 months and 1-year appointments.

Telephone calls were made to each patient to arrange a consultation or to reschedule the appointment based on urgency (Fig 2). Patients **who** were not suitable for postponement of consultation were scheduled immediately.

Patients who were deemed 'cold' were given **the** option to consider having their consultations done via **telemedicine**. It was ensured that all their concerns and supply of medications were adequately addressed. Patients who indicated keenness for video or teleconferencing were counselled on methods of accessing these modalities. All clinical and prescription details were documented in the EMR at time of consultation. Future appointments were also given at the same time.

Total of 471 cases scheduled over a 4-week period were screened. Specific management plan for each group of cases is detailed below:

1.1 Uro oncology cases

This group of patients **comprised of** the most urgent cases in whom any delay in treatment may cause progression and development of metastasis. This may affect their survival, quality of life and anxiety level. We identified these cases and stratified them according to urgency. Some cases also required early oncology referral for radiotherapy, neoadjuvant or adjuvant chemotherapy [6]. Rescheduling uro-oncology cases adhered strictly to the recommendation of latest European Urological Association (EUA) guidelines suitable for current pandemic. After screening 91 patients, only 33 patients were deemed urgent to be seen as scheduled **[7]**.

1.2 Urolithiasis

Patients in this group with obstructive uropathy, stent in situ (risk of neglected stents) and with potential worsening of renal function were seen as **scheduled**. There were 13 patients, out of 57 patients screened that needed urgent consultation.

1.3 Lower urinary tract symptoms (LUTS)

These patients can be considered non-urgent as long as they have established urinary bladder diversion by urethral or suprapubic catheterization in case of bladder outlet obstruction or stable symptoms. These patients needed catheter replacement schedule, assessment of symptoms control and continuation of medication supply. They could be safely rescheduled to a later date by telephone. A total of 297 patients were screened and, only 5 patients had to be seen urgently for review of investigations and for immediate treatment commencement.

1.4 Andrology

Patients attending the andrology clinic for erectile dysfunction and male infertility can be rescheduled safely, especially during a crisis period. Rescheduling of these cases may not

cause significant difference in management outcome. We rescheduled all 18 patients to later date.

1.5 Functional

We found that the patients attending the urology clinic for functional reasons like urinary incontinence and neurogenic bladder (N = 8) were all safe to be postponed. This was confirmed on assessment during telemedicine consultation.

The pandemic has taught clinicians that patient consultation workflow needs to be in place for continuous patient care despite the efforts of rescheduling out-patient appointments. This was a starting point at our institution, and we outlined our workflow design as a template for medical institutions with an increased backlog of patients requiring rescheduling. This move also opened new possibilities in the out-patient management system linking to the option of telemedicine.

Telemedicine has now emerged as an option to salvage the outpatient clinic services without causing congestion in future appointment system and reducing patient anxiety due to loss of follow-up and prescription of medicines [8]. This would benefit patients who are stable and prefer remote consultations as well as in the event of recurrent pandemic scenario.

We were also faced with setbacks in the rescheduling process. Pandemic driven processes were often urgent in nature with limited time for sequential planning and discussions as compared to the pre-pandemic period. With limited information, the implications of decisions made were still largely unknown [9]. Occasionally, disease activity or severity assessment does not coincide with the previous treatment recommendations causing delay and dissatisfaction from the patient and their families [10].

Another concern for optimal provision of care for the non-COVID patients, is the lack of communication between the clinical staffs and the administrative office on clinical cases. This could potentially result in rescheduling of patient visits with uncertainty in diagnostic decisions due to

protocol revision and lab closures. Despite various efforts to build a closer working tie between the clinical and hospital management department, divide still exists. Institutional reconfiguration within the health care system still needs to improve to provide care for non-COVID patients in times of public health crisis such as the COVID-19 pandemic [11].

Conclusion

In summary, a robust clinic management system is crucial during a pandemic or in crisis situation to avoid risk of delaying treatment. This protocol prevents future overcrowding in the clinic with social distancing deemed the new normal. Suboptimal clinic management during crisis may lead to compromise of patient care in future. This strategy will give clinical units a guide to avoid unwanted displeasure among doctors and patients. A dedicated team led by a senior member of the team is crucial in ensuring smooth delegation of duties and proper documentation of all actions taken with regards to patient management.

Ethical Approval

This study was reviewed and approved by University Malaya Medical Centre Medical Research Ethics Committee (reference number: 202046-8459).

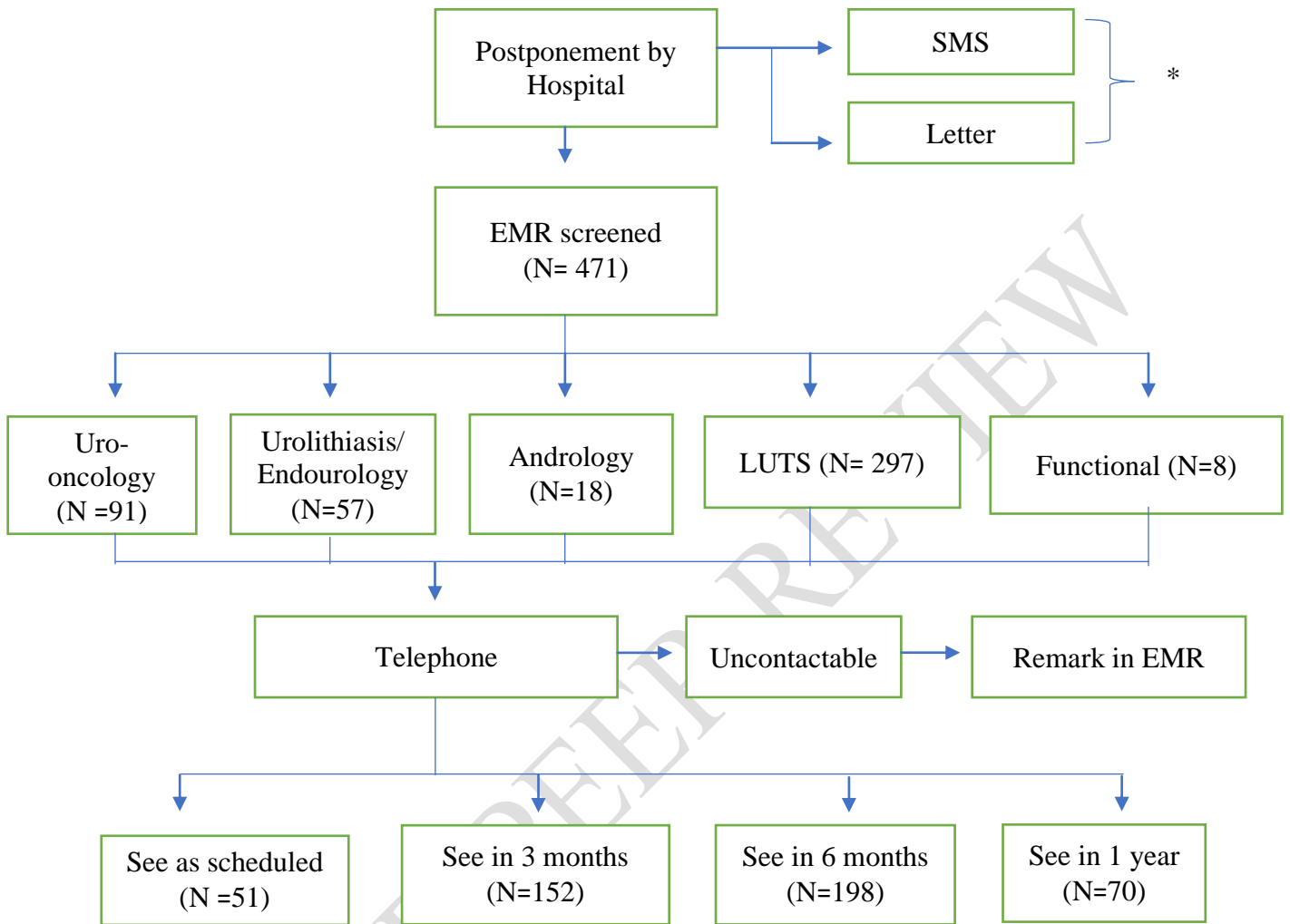
Consent

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

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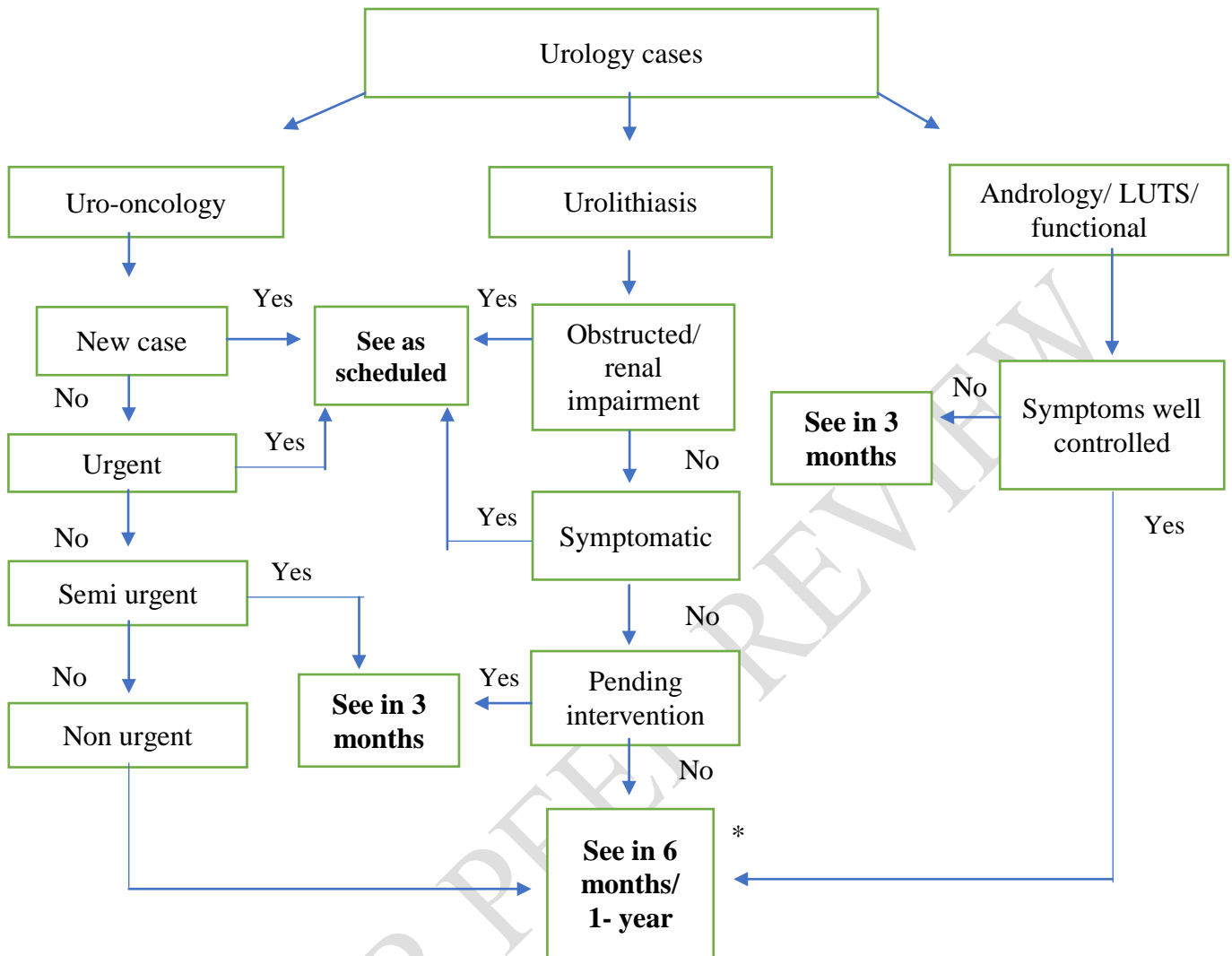
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Fig 1: Outpatient urology clinic management protocol during initial phase of COVID-19 pandemic announcement



*Despite postponement by SMS and letter, patients who showed up at outpatient clinic who were seen by an appointed doctor

Fig 2: Protocol of rescheduling outpatient appointments based on urgency



*Cases were screened for suitability of telemedicine