SPECIAL PAPER

Improving the delivery of electroconvulsive therapy in the West Bank, Palestine

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The authors describe an international project to improve quality of electroconvulsive therapy (ECT) provision in a low- to middle-income territory. Shortcomings in professional training and delivery of clinical care had been identified, including staffing limitations, outdated ECT machines and use of unmodified treatment. The UK Royal College of Psychiatrists, the charity Medical Aid for Palestinians and the Palestinian Ministry of Health collaborated to provide new equipment, deliver specialist training and develop a modern service protocol. The resulting improvements, such as the introduction of electroencephalogram monitoring and stimulus dosing, are detailed, along with obstacles encountered, lessons learnt from the project and aspirations for the future.

Electroconvulsive therapy (ECT) is a safe, effective, evidence-based medical treatment.[1] It is indicated for affective episodes, catatonia and schizophrenia.[2,3] It is available worldwide[3] and involves an electrical stimulus to the brain, inducing a generalised convulsion typically lasting <1 min. To avoid injury, standard practice worldwide, known as modified ECT, involves administration of a muscle relaxant shortly before the stimulus,[4] with general anaesthesia to avoid awareness of the induced paralysis.[5]

The West Bank is home to 3 million Palestinians living in an archipelago-like network of towns and rural areas. Daily life is affected by decades of ongoing military occupation, in proximity to numerous Israeli settlements and checkpoints. Obstruction of free movement, economic deprivation, uncertainty for the future and trauma from losses result in widespread resilience, while compounding mental healthcare needs;[6] lifetime prevalence of depressive disorder may be as high as 24%.[7] With lower- to middle-income resources, this need is only partially met by the Palestinian Authority's Ministry of Health (MoH), which provides one psychiatric hospital and 13 community mental health centres, supplemented by non-governmental organisations. There is no mental health legislation, and the ongoing suspension of state legislature prevents its introduction.

The Royal College of Psychiatrists' (RCPsych's) International Office has recently been involved in several development projects worldwide, such as in Iraq.[8] A collaboration with Medical Aid for Palestinians (MAP, https://www.map.org.uk), a UK-based charity, has been fully described elsewhere,[9] highlighting the role of partnership and local ownership to empower communities to make sustainable mental healthcare improvements. As part of that project, a need for training in ECT for West Bank doctors was highlighted and, on behalf of RCPsych, the lead author (RB) provided an online teaching session in November 2020, mainly covering practical aspects of the treatment.

During this teaching, it became apparent that there was significant scope for improvement in ECT delivery. A project to develop the service began, facilitated by MAP, with a view to improving clinical skills, rewriting the local ECT protocol and replacing medical equipment. The description of the service, below, reflects the situation before the first mission by UK psychiatrists to the facility in May 2022, supported by MAP and RCPsych.

Existing service

Overview

Bethlehem Psychiatric Hospital (BPH), in the city of Bethlehem in the south of the territory, provides the country's only mental health in-patient service. It also provides the only ECT service, to both in-patients at BPH and out-patients. Obstacles to travel, including poor road infrastructure and checkpoint restrictions, especially from northern districts of the territory, mean that out-patients often miss planned treatments. ECT clinics run on Sundays and Wednesdays, with 8 to 16 patients typically treated per list and 1050 treatments delivered to around 250 individual patients annually. Psychiatric indications and sex data are shown in Table 1.

Challenges

The absence of mental health legislation means that consent is taken from relatives in all cases; establishment of decision-making capacity does not feature in Palestinian medical practice. For out-patients, consent is given by families specifically for ECT; for in-patients, however, relatives are asked to consent to admission and any treatment that might be subsequently prescribed; ECT is not always specified when consent is taken.

Table 1

Diagnostic indications for electroconvulsive therapy in the West Bank, Palestine, January to December 2023, stratified by sex

Diagnosis	Number of treatment sessions		
	Male	Female	Total
Major depressive disorder	249	115	364
Schizophrenia	219	96	315
Bipolar affective disorder	75	68	143
Schizoaffective disorder	6	26	32
Obsessive–compulsive disorder	52	20	72
Catatonia	22	24	46
Other	78	0	78
Total	701	349	1050

There is a concern among Palestinian doctors regarding litigation in the event of a medical intervention resulting in an untoward event that outweighs worry about criticism of withholding treatment. This leads to even minor medical cautions, such as mild systemic disease, resulting in denial of treatment.

Unmodified ECT (induction of seizures without muscle relaxation or anaesthesia) was occasionally used if a patient declined anaesthesia or the anaesthetist considered there to be specific cautions to its use. Just as many patients opt against sedation for short procedures like endoscopy, anaesthesia for ECT was often declined for broadly similar reasons: a wish for the procedure to be swift, or an aversion to cannulation or the sensation of being induced. Additionally, mild systemic disease, such as hypertension, could lead the anaesthetist to withhold anaesthesia, in the knowledge that the patient would receive treatment anyway.

There was no formal training for senior psychiatrists or the resident doctors who delivered the treatment. Consequently, there was a lack of updated specialist knowledge of ECT among those responsible for it. The same applied to nursing auxiliaries, reflected in their approach to manually holding patients during treatment.

There was no evidence-based approach to ECT delivery. All treatments were given bilaterally and there was no system for dosing, risking unnecessary exposure to cognitive side-effects.[10] For out-patients, a set number of sessions, typically four or six, was requested in advance by referrers. This is in contrast to evidence-based guidance[11] and represents significant undertreatment in many cases. Limited communication with out-patient referrers precluded discussions around stopping anticonvulsant medication.

Dated ECT machines with non-functioning electroencephalogram (EEG) functions meant that seizures could not be analysed for quality and safety. Conversely, cardiorespiratory monitoring equipment was in working order but not routinely used. Limited anaesthetic cover was vulnerable to absences. The anticonvulsant agent propofol was the only choice of anaesthetic, leading to difficulties in achieving adequate therapeutic seizures in some patients.[5]

Service development

Following the online training session in 2020, MAP facilitated sequential meetings throughout 2021, involving both UK (MAU and RB) and local psychiatrists (including II). Through discussions, consensus was reached on priorities. All partners agreed actions to improve service quality at BPH's two ECT clinics, working towards addressing the above challenges by establishing acceptable standards of care and embedding them in practice. MAP agreed to fund a modern ECT machine for each clinic, RCPsych to deliver expert training to staff and assist in development of the new protocol and MoH to work with staff and international partners to develop a new protocol for ECT provision. Travel restrictions caused by the worldwide COVID-19 pandemic delayed until 2022 a visit to BPH by MAU and RB, organised and funded by MAP.

Equipment and training

Practical training with RB in Bethlehem in May 2022 was primarily directed at residents. It covered use of the newly procured ECT machines, focusing on EEG monitoring and interpretation. Efforts were made to develop knowledge and skills of anaesthetic and nursing staff during this visit, encouraging the use of monitoring equipment and pre-ventilation, while refraining from administering physical restraint unless ECT was unmodified. Use of unmodified ECT was itself discouraged. This training continued over further ECT sessions during a second mission in July 2022. Subsequently, monthly online supervision sessions were set up between RB and residents. There was an undertaking by MoH to maintain the new equipment.

Protocol revision

Meetings were held, before, during and after both RCPsych missions to Bethlehem, to find a

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consensus on developing Bethlehem's written ECT policy and to guide practice in line with international standards. Throughout this process, the importance of local clinicians and stakeholders finalising their own protocol, with guidance from RCPsych experts, was held paramount. To this end, consultations involved local psychiatry residents and specialists, as well as the hospital's medical director, ECT anaesthetist, lead nurse for ECT and chair of the Mental Health Unit at MoH. The protocol has been adopted as an official MoH policy document.

Regarding minimum staffing, it was agreed that an anaesthetist and a psychiatry resident with adequate competencies must be present at every treatment. There was consensus that unmodified ECT should stop, recognising that (a) resource limitations in the West Bank are not so profound that they necessitate the practice; (b) patients were not likely to be making truly informed choices when they opted for it; and (c) the process by which clinicians were selecting this form of treatment was rarely evidence based.

The revised protocol introduced a more advanced, evidence-based administration of treatment, with stimulus dosing[12] and EEG monitoring.[13] It incorporated improved anaesthetic procedures, mandating the use of cardiorespiratory monitoring equipment for all patients throughout the peri-ECT period, and pre-oxygenation to allow for adequate seizure monitoring.[11]

Lastly, an improved system for liaison with community referrers was written into the policy. This mandated more extensive, structured clinical information to be submitted with the referral and frequent reviews during the treatment course, to ensure clinically appropriate duration of treatment.

Obstacles to service development

As expected in international collaboration, communication difficulties affected implementation of service improvement. Receptiveness to change differed among professional groups. The residents who had initially highlighted the need for training were the most sympathetic, but workplace hierarchy, limiting the status of their input, meant that ownership of the development programme was required from senior colleagues. Wider legal and resource limitations dictated that some goals, such as the procurement of alternative anaesthetic agents and an overhaul of consent procedures, would not be achieved in the foreseeable future.

Language presented challenges during training. RB cannot speak Arabic, and English proficiency is variable among local clinicians, impacting on the clarity and time needed for translation. This was aided during the second mission by the presence of an Anglo-Arab psychiatrist (NTD). Additionally, anaesthetic and nursing staff may not be as receptive to mentoring from a psychiatrist as from an expert in their own discipline.

Lessons learnt

It proved important to consider ECT practice within the context of broader healthcare provision and medical training, setting realistic goals. Focusing on major areas of knowledge, skills and procedure requiring improvement, such as ensuring proper monitoring and adequate clinical review of patients to guide ongoing treatment, had to take precedence over minor developments, such as the introduction of unilateral ECT.

With respect to working with international partners, agreement and communication of aims proved paramount. Indeed, the first visit, while training did take place, was largely a fact-finding and relationship-building mission. Instilling local ownership of the project was necessary before focusing on details of service improvement.

The future

To ensure that short-term gains from having trained current residents are sustained, an ECT lead role should be undertaken by a local specialist. This doctor would directly deliver treatment on an infrequent but regular basis, while supervising the residents who cover most sessions and ensuring that improvements to the protocol are followed in practice. This doctor should benefit from visiting a more developed healthcare system to observe ECT provision, coupled with ongoing remote mentorship by an established expert. Affiliate membership of RCPsych would give access to continuing professional development resources, engendering an evidence-based medicine mentality.

There may be scope for further work with MoH to ensure legal protection, following untoward incidents, for clinicians who have practised in good faith according to guidance. Lastly, there is a pressing need for mental health legislation in the West Bank, introducing the concept of mental capacity into consent procedures.

In conclusion, ECT is a safe and effective treatment when administered according to the evidence base. In the West Bank, it has been limited in terms of safety, effectiveness and patient acceptability for various reasons. Collaboration of local stakeholders with international partners has been helpful in improving many of the existing problems, with some advances easier to implement than others. As with any service improvement work, goals in a project such as this should be few and realistic, while long-term sustainability of change is paramount.

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Author contribution

R.B. contributed to the conception and design of the project and drafted the manuscript. N.T.D. contributed to the design of the project and revised the draft manuscript. I.I. contributed to the conception and design of the project and revised the draft

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manuscript. M.A.-U. contributed to the conception and design of the project and revised the draft manuscript.

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Declaration of interest

None.

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