

COMMON PHYSICAL HEALTH ISSUES IN PERSONS WITH INTELLECTUAL DISABILITY

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ABSTRACT

Persons with Intellectual Disabilities (ID) have a higher prevalence of physical health impairments leading to morbidities and premature deaths. The common conditions implicated are epilepsy, gastrointestinal concerns such as constipation and dyspepsia, sensory impairments, musculoskeletal issues, and thyroid disorders. Chronic diseases including hypertension, type 2 diabetes, obesity, and metabolic syndromes occur at an earlier age and nearly half of these conditions are detected only by screening. Annual health checks by primary care teams in the community are being implemented in many countries. Comprehensive health checks using standard questionnaires and preventative health check guidelines specially designed for persons with intellectual disabilities are of great help to primary care physicians in busy clinical settings. Addressing the concerns raised by healthcare professionals on the lack of knowledge and understanding of health needs of persons with ID can be easily addressed by appropriate training programmes. Eliminating communication barriers can be achieved by appropriate training programmes and implementing the use of easy-read materials. Reasonable adjustments must be implemented in practices to facilitate better health experiences for persons with ID and their caregivers.

Key words: Intellectual disability, physical health, annual checks, primary care, reasonable adjustments

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INTRODUCTION

The Diagnostic and Statistical Manual-5 ("DSM-5") defines intellectual disabilities as neurodevelopmental disorders that begin in childhood and are characterised by intellectual difficulties as well as difficulties in conceptual, social, and practical areas of living.¹ The three diagnostic criteria that need to be satisfied to establish the diagnosis of intellectual disabilities are: deficits in intellectual functioning; deficits in adaptive functional skills; and the occurrence of these symptoms before 18 years of age. The prevalence of intellectual disability globally varies between 1-3 percent.² Persons with ID experience a higher morbidity and mortality secondary to chronic physical impairments when compared to the general population.³ Several landmark studies have reported higher mortality rates, shorter life expectancies, and excess premature deaths, with mortality rates being three to 18 times higher than the general population.^{4,5,6,7} The confidential enquiry for deaths of persons with ID in UK noted that persons with ID died 16 years younger than the general population.⁸ The life expectancy of persons with ID is notably lower in persons with severe ID and the median life expectancy with mild ID was 74 years, moderate ID was 67.6 years, and severe ID was 58.6 years.⁹ The common cause specific mortality was attributed to cardiovascular diseases, respiratory diseases, neoplasms, and nervous system disorders. Deaths from aspiration pneumonia and pneumonias were noted to be 10 times higher when compared to the controls.¹⁰ This increased mortality is greatly attributed to inadequate provision of healthcare, inequalities faced by persons with ID, and barriers to healthcare leading to a multitude of morbidities when compared to the general population.¹¹ The general health status of persons with ID is probably an underestimate as parents and caregivers perceive their health status to be good when compared to findings in the medical examination.^{12,13} Annual health checks offered by GPs for persons with ID has identified high unmet physical and mental health needs.¹⁴⁻¹⁷

Barriers to healthcare for persons with ID have been widely discussed in the medical literature and include factors relating to the person with ID, the healthcare professional, and the environment. Doherty et al^{18,19,20} reviewed the barriers and facilitators to primary care for persons with ID and identified several important domains and barriers to consider when providing appropriate healthcare for persons with ID, including a lack of knowledge or awareness of the needs of persons with ID and a lack of reasonable adjustments in practice.^{21,22} Other identified barriers include a lack of or inadequate communication skills of healthcare providers, leading to misdiagnosis or the inability to make an appropriate diagnosis.^{23,24}

Inadequate communication with caregivers, failure to speak to the person with ID,²⁵ and provision of healthcare information that is not easily understood are some other examples of barriers to communication. Health information should be provided as easy-read materials and the use of sign languages to improve the communication between healthcare providers and persons with ID.²⁶ Fear and anxiety from visits to the clinic and new surroundings including unfavourable physical environments are important factors that act as barriers to healthcare. Prolonged waiting times and the inability to express oneself during the short consult times are also important barriers to consider.^{20,27}

Locally, a cross-sectional survey of general practitioners (GPs) in Singapore was conducted to gauge their knowledge and challenges in the clinical management of persons with ID. Nearly 90 percent of the respondents identified the lack of communication skills in persons with ID as affecting the medical assessment during a consult. Only a third of the GPs surveyed felt that they had sufficient knowledge about the mental and physical needs of persons with ID. Three-quarters of GPs felt that further training to understand the medical needs of persons with ID would be beneficial in providing healthcare for persons with ID.²⁸

This article highlights some salient concerns about the provision of healthcare for persons with ID, common physical impairments, and how healthcare can be provided to prevent or minimise healthcare inequalities.

PERSONS WITH INTELLECTUAL DISABILITIES AND THE BURDEN OF CHRONIC DISEASES

With advances in medical care over the last five decades, there has been a significant increase in life expectancy for all segments of the population except for persons with ID, who experience ageing-related healthcare issues earlier when compared to the general population.²⁹ The major chronic conditions that affect persons with ID are cardiovascular diseases,³⁰ obesity,³¹ diabetes,³² epilepsy,³³ constipation,³⁴ osteoarthritis,³⁵ and thyroid disorders.³

First, medical conditions that can cause pain or discomfort can result in disordered behaviour, especially in the more severely disabled who have difficulties communicating verbally.² Common physical health issues will be covered in Unit 3 of this issue, but it is necessary to highlight here that even simple medical conditions such as constipation and gastro-oesophageal reflux may result in much distress and behavioural changes.

Second, the level (or lack) of support that is given to the person with ID can often influence the behaviour. Persons with ID with verbal communication difficulties may need communication aids such as using a Pictorial Exchange System (PECS) or sign language. If these are not available in his/her current environment, this may result in maladaptive ways to communicate needs. Associated

visual or auditory impairment may worsen the situation, and likewise physical disabilities such as cerebral palsy. Some may also have sensory needs, e.g., sensory modulation difficulties, especially seen in those with autism. This can be in the form of being hypersensitive to lights, sounds, or touch, which often leads to behavioural problems when they feel overwhelmed, especially when they are placed in a new environment such as a new School or Day Activity Centre. On the other hand, sometimes the behavioural issue may arise not because of inadequate supports but rather due to the lack of understanding or mismatched expectations on the part of the caregivers, and it may be helpful to discuss and moderate these expectations with them.

Next, it is helpful to look into possible emotional precipitants to the change in behaviour. It is normal for persons with ID to experience psychological or emotional distress after going through certain changes in their lives, such as a change in residential setting or the teachers/trainers or people caring for them, and certain behavioural responses can be seen as understandable, even adaptive. Because of their disability, there may be greater challenges in making sense of and coping with transitions, but they can often be helped through preparing and counselling them through these changes, e.g., through the use of social stories or teaching coping skills. It is when the distress is persistent and leads to much functional impairment that we begin to look into the presence of possible psychiatric disorders.

Cardiovascular Risk Factors

Diabetes, hypertension, hypercholesterolaemia, and metabolic syndromes are important risk factors for cardiovascular events and are associated with higher morbidities both in persons with ID and in the general population. The Healthy Ageing in Intellectual Disability study evaluated the prevalence of cardiovascular risk factors, along with the prevalence of previously undiagnosed cardiovascular risk factors and the conditions that predispose persons with ID to cardiovascular diseases. The study showed that the prevalence of hypertension, diabetes, and hypercholesterolemia was 53 percent, 14 percent, and 23 percent respectively. In all three risk factors, 45-50 percent were previously undiagnosed. Additionally, metabolic syndrome was seen in 45 percent of the people with ID and 90 percent were previously undiagnosed. These figures certainly raise concerns regarding the unmet health needs of the ID population and call for policymakers to implement practice guidelines on early detection and management of these cardiovascular risk factors in persons with ID to prevent major morbidities.³⁶

Obesity

Obesity is a modifiable condition that, if left unattended, leads to major cardiovascular morbidities and other chronic health conditions. The longitudinal health and intellectual

disability study (LHIDS) analysed data on obesity amongst adults with intellectual disabilities. The prevalence of obesity in persons with ID was 38.3 percent versus 28 percent of the generalised population. The risk factors implicated were being female, having Down Syndrome, fewer physical activities, taking medications that cause weight gain, and consuming sugared drinks.³¹

The gender ratio suggests that women have a higher incidence of obesity when compared to men with ID and to the general population (39.3 percent of women with ID versus 27.8 percent of men with ID and 25.1 percent of women and 22.7 percent of men in the general population).³⁷ The Irish longitudinal study for ageing, which assessed the health and wellbeing of persons with ID above 40 years of age, also noted the incidence of obesity/overweight status to be 69 percent, with higher frequency in women (72 percent). Living with family or community group homes, being below 50 years of age, and with mild to moderate ID were considered relevant risk factors for developing obesity.³⁸

Diabetes

A systematic literature review conducted showed that the prevalence of diabetes in persons with ID varied from 0.4 percent to 25 percent.³⁹ In an epidemiological study conducted in the Dutch primary care settings, it was noted that the prevalence of diabetes was 1.5 times higher than the general population (9.9 percent in persons with ID versus 6.6 percent of the general population). Women with ID had a higher prevalence than men. Complications secondary to diabetes, especially cardiometabolic complications, were noted to be less than the general population.⁴⁰ Hospitalisations secondary to diabetes-related complications were noted to be three times higher than the general population.⁴¹ A large multi-ethnic cohort study (the STOP diabetes cross-sectional screening study) detected 1.3 percent of persons with ID to have diabetic status and 5.2 percent to have impaired glucose tolerance. The risk factors implicated in this cohort were first-degree family members with diabetes and non-white ethnicity. Of note, 16 percent of the study population were South Asian in origin.⁴²

Hypertension

The prevalence of hypertension in a population-based survey of adults above 18 years of age with intellectual disability who participated in the special Olympics event was 48 percent, with a higher prevalence in males when compared to females (50.7 percent versus 43.1 percent).⁴³

Metabolic Syndrome (MetS)

Metabolic syndrome, which is currently a global concern, is defined as the presence of three out of the following five factors: hypertension; diabetes mellitus; abdominal obesity; low high density lipoprotein cholesterol; and high

triglycerides levels.⁴⁴ The association of MetS and chronic diseases such as cardiovascular diseases, diabetes, chronic kidney disease, arthritis, certain malignancies, and early death has been well documented.^{45,46} In a comprehensive literature review done by Lakhan et al, they noted that the rates of MetS in persons with ID were 25 to 45 percent. The determinants of developing MetS in this population were noted to be a lack of physical activity, living in community dwellings, the female sex, a lack of health education, and promotion and use of conventional antipsychotics.⁴⁷

The common theme that emerges in developing chronic conditions leading to cardiovascular and other morbidities appears to be a lack of physical activity and a sedentary lifestyle. The lack of physical activity is considered as the single most important risk factor for developing obesity in persons with ID.⁴⁸ Multiple barriers to physical activity have been identified in persons with ID, including a dependence on caregivers, lack of time, financial constraints, difficulty in travelling, social acceptance, and a lack of knowledge.⁴⁹ In a survey conducted by Republic Polytechnic, Singapore in conjunction with the Movement of the Intellectually Disabled of Singapore (MINDS) on lifestyle and behaviours of persons with ID, it was demonstrated that 75 percent of persons with ID did not meet the standard of requirements of physical activity and 90 percent of the caregivers did not exercise with persons with ID. This data was collected within the organisation for quality review and hence was obtained from the organisation.

Strategies for Management

Approaches to the management and prevention of chronic diseases can be classified into the following⁵⁰:

1. Medically-led programmes by medical practitioners and healthcare professionals
2. Peer-led and can be conducted by persons with ID
3. Self-motivation programmes focussing on behavioural modification methods

Annual health checks for persons with ID performed in community health settings using comprehensive healthcare questionnaires have been found to be extremely beneficial. The learning disabilities observatory undertook a systematic review of the evidence base for annual health checks and noted that there was a 60 percent increase in the diagnosis of a new condition and 2.54 additional health problems discovered with every new visit. Additionally, the health checks also promoted uptake of vaccines, screening for cancers, and detection of sensory impairments.⁵¹⁻⁵⁵

Health promotion initiatives for prevention of chronic diseases in persons with ID has been studied for Type 2 Diabetes Mellitus in persons with ID. The review by Taggart et al looked at three studies and their interventions

and outcomes. The STOP study dealt with the diabetes prevention programme for persons with mild to moderate ID. This was a self-management programme specifically catered to persons with intellectual disability as the general programmes fail to understand the cognitive concerns, communication difficulties, learning skills, and lifestyle factors for persons with ID. The STOP programme focussed on goals linked to nutrition and physical activity. The outcomes were difficult to evaluate due to the small number of participants but the overall impact was positive both for persons with ID and their caregivers.^{56,57}

The Desmond ID programme was designed to self-empower persons with ID to manage with the help of support staff. The study found a reduction in HbA1c between the participant and the control group. The programme also focussed on diet, physical activity, and the importance of taking medications.⁵⁸

OK Diabetes was a supported 1-to-1 self-education and management programme. The participants were persons with mild to moderate ID and the programme was based on modification of diet and encouraging physical activity. The evaluation of the programme was very positive and 35 percent of the group who successfully attended the programme lost >5 percent body weight or dropped HbA1c to <5.5 mmol/mol.⁵⁹

EPILEPSY AND PERSONS WITH INTELLECTUAL DISABILITY

Epilepsy is the most common medical condition that occurs in persons with ID and the prevalence and severity of epilepsy increases with severe/profound ID. The overall prevalence of epilepsy in persons with ID is 22-30 percent, with 10 percent being mild ID and 30 percent being moderate/severe ID.^{33,60,61} Persons with ID and epilepsy have higher physical impairments and mortality when compared to persons with ID without epilepsy.⁶² They also have higher hospital admissions and higher healthcare costs.⁶³ Two-thirds of persons with ID and epilepsy are refractory to medical treatment.⁶¹ The association of ID and drug-resistant seizures with neurological sequelae is attributed to genetic/chromosomal abnormalities or structural changes in the brain.⁶⁴ Single-gene defects are implicated with epilepsy and intellectual disability. SCN1A mutation has been associated with Dravet syndrome, presenting with febrile and non-febrile seizures in the first year of life with progressive developmental delay from the second year of life. Drug-resistant epilepsy is implicated in sudden unexpected death in epilepsy (SUDEP).^{65,66} Individuals with epilepsy and intellectual disability have a standardised mortality ratio five times higher than that of the general population.⁶⁷

Establishing a Diagnosis

The diagnosis of epilepsy is often established by obtaining a detailed history, investigations, classification of the type of

seizure, and the aetiology. Obtaining a detailed history can be challenging for persons with ID as the caregiver or allied healthcare professionals in day care or residential setting may have limited knowledge or may not have the time to document the episode in detail. Misdiagnosis of epilepsy in persons with ID may be seen in up to 28-32 percent of cases⁶⁸ and may be attributed to complexity of assessment due to communication difficulties by persons with ID, mistaken diagnosis for coexistent physical conditions, psychiatric disturbances, sleep disorders, and behavioural disturbances. Obtaining a detailed and relevant history including precipitating factors, aura prior to the episode, type of seizure, duration of seizure, and post-epileptic sequelae is beneficial. Engaging and having a conversation with the persons with ID should be the first option and reasonable adjustments need to be incorporated into practice. Caregivers can be a potential source of information.

A detailed recording of the event using a mobile device can be a very reliable diagnostic tool, as is an electroencephalogram (EEG), which is invaluable in establishing the diagnosis of epilepsy. There are challenges to overcome in performing the EEG or imaging studies in persons with ID and efforts to counsel persons with ID, use of sedatives, and occasionally use of general anaesthesia should be considered. Video or ambulatory EEG are other possible options. Magnetic resonance imaging or computerised tomography of the brain is helpful in identifying structural changes. Chromosomal microarray to identify the cause of ID and associated epileptic conditions are occasionally helpful, as are laboratory investigations done specifically to look at metabolic causes.

Management

Appropriate management plans to control seizure activity helps reduction of sequelae, thereby reducing stigmatisation, social isolation, and secondary morbidities. Treatment of epilepsy in persons with ID must be person-centred and involve a multidisciplinary team. Discussion of treatment options, potential side effects, and the need for monitoring options for treatment need to be discussed with persons with ID and their caregivers. Providing care for persons with ID and epilepsy poses unique challenges due to difficulties in obtaining history, diagnostic dilemmas, difficulties in performing investigations, the presence of complex seizures, and the refractory nature of epilepsy to medications.⁶⁹ The consensus guidelines for management of epilepsy for persons with ID has been established based on the aforementioned concerns.^{70,71}

Obtaining the history should not only involve confirmation of the diagnosis of epilepsy but also the level of support available for the persons with ID to manage the care plans, the impact of epilepsy on emergency services, injuries, and hospitalisations, and the quality-of-life issues for persons with ID and caregivers.

Management Plans

The mainstay of control of seizures is pharmacological therapy. Monotherapy with antiepileptic medications is the first option. Failure to control with one medication will often involve further evaluations and then the need to consider adding on second- and third-line medications. Recommended first-line medications for generalised seizures are sodium valproate or lamotrigine. Recommended first-line medications for partial seizures are sodium valproate, carbamazepine, and lamotrigine. Lamotrigine has been proven useful for all types of seizures in Lennox Gestaut syndrome. Rescue medications such as midazolam and diazepam can be considered for control of prolonged seizures at home and community settings. The choice of appropriate anticonvulsants has been well elaborated by Lance V et al.⁷²

The concern with the use of antiepileptics is the associated adverse effects and the difficulties in monitoring the effects. Careful discussion with the person with ID and their caregiver is essential. A campaign called STOMP (stopping overmedication for persons with learning disabilities) has been initiated by the National Health Service of England to investigate practices of prescribing medications for persons with ID.⁷³

Non-Pharmacological Interventions

Vagal nerve stimulation therapy could be considered as an adjunct therapy for seizures refractory to medical treatment or the presence of intractable seizures.⁷⁴ Corpus callosotomy leading to a reduction of drop attacks has been evaluated.⁷⁵ A ketogenic diet is considered as an alternative adjunctive therapy and is beneficial to certain individuals with epilepsy.

Some Important Points to Note

Service delivery for persons with ID and epilepsy is very fragmented. The ILAE taskforce has acknowledged this and highlighted several areas of concern.⁷⁶ The right care Toolkit (2020) published by the National Health Service in England includes the purple light toolkit, which is specific to persons with epilepsy and neurodevelopmental disorders. The purpose of this toolkit is to provide standards of care and enhance quality improvement. Step Together is a report published to integrate services for persons with intellectual disability and epilepsy.⁷⁷

Education for persons with ID and their caregivers is essential. Development of care plans that are person-centred and conducting discussions with the caregivers and the team providing care for the person with ID are critical. Training programmes should be developed with specific focus on safety check lists and SUDEP.⁷⁸ Management of epilepsy in persons with ID is complex and requires services that understand the complexity of these management issues.⁷⁹

CONSTIPATION IN PERSONS WITH INTELLECTUAL DISABILITY

Constipation is defined as a bowel syndrome where there is difficult or infrequent passage of stools, hard stools, or a feeling of incomplete evacuation. The Rome IV criteria has diagnostic criteria in place to diagnose constipation.⁸⁰

Diagnostic Criteria

These must include two or more of the following*:

1. Straining during more than ¼ (25 percent) of defecations
2. Lumpy or hard stools (Bristol Stool Form Scale 1-2) in more than ¼ (25 percent) of defecations
3. Sensation of incomplete evacuation in more than ¼ (25 percent) of defecations
4. Sensation of anorectal obstruction/blockage in more than ¼ (25 percent) of defecations
5. Manual manoeuvres to facilitate in more than ¼ (25 percent) of defecations (e.g., digital evacuation, support of the pelvic floor)
6. Fewer than three SBM per week
7. Loose stools are rarely present without the use of laxatives
8. Insufficient criteria for irritable bowel syndrome

*Criteria fulfilled for the last three months with symptom onset at least six months prior to diagnosis

Constipation is classified as primary or functional constipation and secondary or organic causes, which include intestinal or extra intestinal causes, metabolic causes, hormonal causes, and secondary to medications.^{81,82} The prevalence of constipation in persons with ID ranges from 33 to 50 percent. In a meta-analysis by Robertson et al, the prevalence of constipation in persons with ID was reported to be 50 percent in 14 of the 31 studies and 33 percent in 21 of the 31 studies when compared to 0.1 percent of the general population.⁸³

Persons with ID often do not have a balanced healthy diet. They are dependent on their caregivers to provide a healthy diet.⁸⁴ In addition, they tend to not engage in physical activity and lead a sedentary life. This is partly due to physical disability and lack of support structures to facilitate and promote a healthy lifestyle.⁸⁵ The need for antipsychotics and antimuscarinics is higher in persons with ID and this decreases the gut motility and aggravates constipation.⁸⁶ Persons with Down Syndrome have a higher incidence of hypothyroidism, which decreases gut motility and causes constipation.⁸⁷ The clinical symptoms and signs of constipation are similar to those of the general population

but eliciting the history involves appropriate communication skills. The clinical presentations are: straining to pass stools; the presence of hard stools; infrequent defaecations; blood in stools; haemorrhoids; and prolapsed rectum. They can present with behavioural concerns and episodes of anxiety related to pain.⁸⁸

Establishing a diagnosis of constipation in persons with ID requires skill and patience. The diagnosis is established via a detailed history-taking, which involves not only verbal communication but also the use of pictures and easy-reading materials. The use of Bristol stool charts facilitates easy understanding and helps determine the frequency and severity of constipation in persons with ID.⁸⁹ The use of dietary and fluid charts may help in understanding the nature of the diet and need for intervention. A detailed clinical evaluation focussing on abdominal examination, plain x-ray of the abdomen, and colonoscopy where indicated are important in establishing the diagnosis. The challenges incurred are related to obtaining consent for procedures, mental capacity assessment, and supported decision-making. Caregiver involvement and attitudes of healthcare providers play a significant role in establishing a diagnosis and providing appropriate treatment.

The common complications noted are bleeding from anal fissures, haemorrhoids, and rectal prolapse. Presence of overflow incontinence proves to be a diagnostic challenge but needs to be considered. Subacute or acute intestinal obstruction from faecal impaction, prolapsed pelvic organs, and faecalomas are serious complications requiring surgical interventions.⁹⁰

Management

There is limited information available for the best possible treatment options for constipation in persons with ID. The principles of management of constipation in persons with ID follows the same principles as that of the general population. Identifying a cause and instituting the appropriate treatment is the first step to managing constipation. Treating known causes and attempting to stop the medications that aggravate constipation should be considered carefully.⁹¹

A simple intervention to manage constipation in persons with ID is to implement a change in lifestyle. In a randomised controlled trial, increasing water intake to two litres per day was shown to increase stool frequency and increasing fibre intake also significantly reduces faecal transit time and increases the stool frequency.⁹² Failure to relieve constipation via implementing lifestyle changes would likely result in commencing medications.

Management should focus on identifying the cause. If the constipation is functional, a change in lifestyle must be considered. Pharmacotherapy should be utilised only if lifestyle management does not work. Management of constipation is a self-help skill, and this should be reinforced by educating persons with ID and their caregivers.⁹³

FALLS IN PERSONS WITH INTELLECTUAL DISABILITY

Gait disturbances, poor balance, and lower limb muscular strength are not uncommon in persons with ID. Unfortunately, there are no community studies to address the incidence of falls in persons with ID in Singapore. In a study by Hsieh et al using data from the Longitudinal Health and Intellectual disability study, it was noted that nearly 25 percent of persons with ID had had sustained one or more falls over a one-year period.⁹⁴ In this study, the risk factors for falls in adults with ID are being female, having arthritis, the presence of a seizure disorder, taking more than four medications, using walking aids, and having difficulty lifting/carrying greater than 10 lbs. In a systematic review conducted by Ho et al, it was noted that the pooled estimate of fall for persons with ID was 39 percent and that the persons with ID living in community and residential settings fell more frequently at a younger age when compared to the general population.⁹⁵

Falls in persons with ID occur at a younger age compared to the general population. These can cause significant injuries resulting in hospitalisation, further morbidity, and, in some cases, mortality. Hence, screening for falls in persons with ID should be considered part of the assessment. Multiple factors that can contribute to the falls can be addressed to reduce the incidence of falls. Some of the very common factors we have encountered in our clinic include cataracts in older persons with ID. Poor vision has been an important factor in these situations. Many have poor lower limb strength due to lack of exercise and a prolonged sedentary lifestyle. A simple assessment can include Romberg's test, gait analysis, walking speed, and the Squat Endurance Test. Referral to an allied health team for assessment and strength training exercises have been implemented at our clinic.

OSTEOPOROSIS IN PERSONS WITH INTELLECTUAL DISABILITY

Bone metabolism is one of the most important determinants of physical health. The prevalence of osteoporosis and osteopenia is noted to be higher in persons with ID. There are multiple risk factors predisposing to the development of osteoporosis in this population. In a cross-sectional study done by R Srikanth et al, 54 percent of the sample population had two or more risk factors for screening for osteoporosis. Of those screened, 55 percent had osteoporosis and 33 percent had osteopenia. The relevant risk factors identified were the use of antiepileptics (64 percent), immobility (23 percent), history of falls (20 percent), and fractures (11 percent).⁹⁶

Primary care physicians in busy clinical practice settings can incorporate some of the standard screening guidelines recommended by governing bodies in the field of intellectual disability. The guidelines are targeted at persons with ID, and syndrome-specific guidelines are available for reviews.⁹⁷⁻⁹⁹

CONCLUSION

Persons with ID develop multiple physical health concerns leading to hidden morbidities that are often unrecognised. The provision of healthcare is complex and the first step to overcoming barriers is to enhance knowledge of the primary healthcare providers to understand the medical needs of this population.

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LEARNING POINTS

- **Annual health checks implemented by primary healthcare staff using standard questionnaires and standard preventative health check lists will be beneficial for persons with ID in identifying their unmet health needs.**
 - **Providing reasonable adjustments in practice by providing extra time, communicating with the person with ID, and understanding their health needs and social needs will provide a good experience for both persons with ID and their caregivers.**
 - **When the presenting complaints are behaviours of concern, medical concerns like constipation, dental pain, and other medical causes need to be ruled out. “Diagnostic overshadowing” where the diagnosis is often attributed to intellectual disability needs to be avoided.**
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