Basics of Mental Health & Clinical Psychiatry
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Lecture 31
Child Psychiatry I

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Hello everyone. Let us start lecture number 31, child psychiatry. The concepts that we will be discussing today, intellectual disability, autism, that is it will come under pervasive developmental disorders, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, communication disorders, language disorders, selective mutism and elimination disorders like eneuresis, pica, and encopresis.

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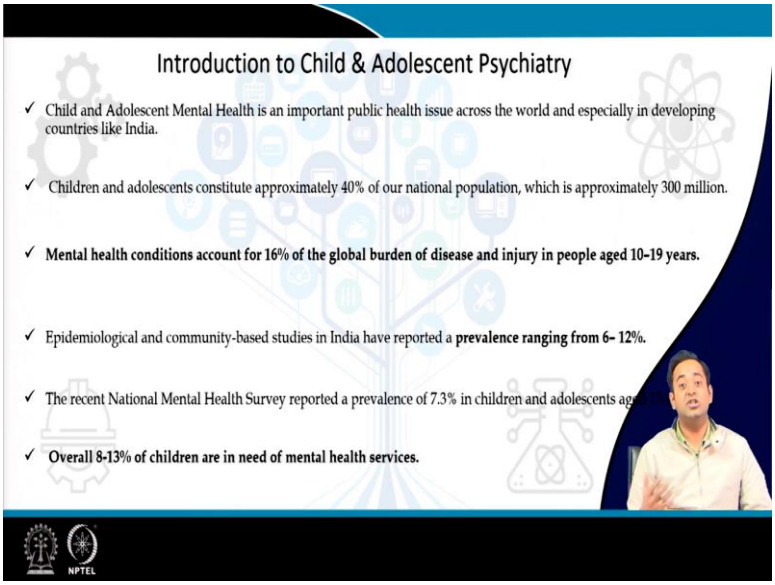

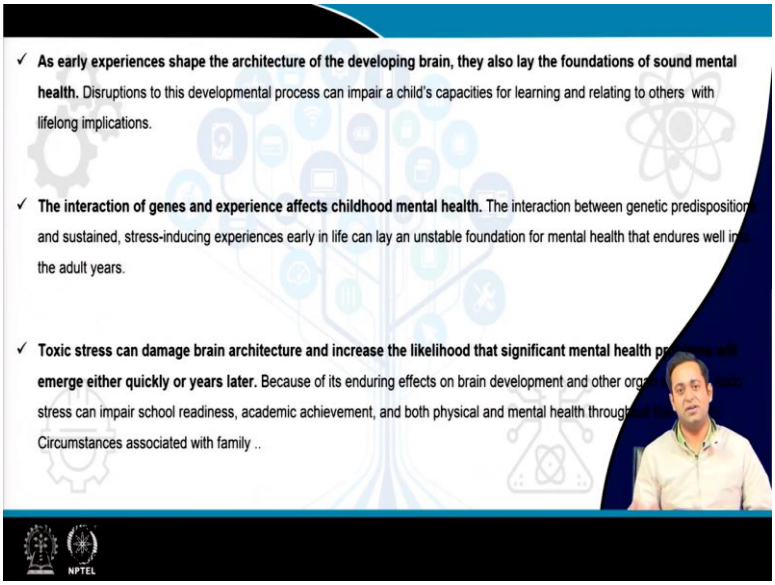

So, child psychiatry, child and adolescent psychiatry basically is a subspecialty of psychiatry, and it basically deals with the developmental issues, behavioural issues, emotional issues, affective cognitive features of the developing child and adolescent as they mature and developed into a adult. So, this particular branch has evolved very recently, and it caters to basically the needs and the needs of child and adolescents.

So, what happens in the initial years, the brain of child is very sensitive, because of the various issues which are present out there. Because there are early experiences which shaped the architecture of the developing brain, and they leave a foundations of a sound mental health. But because of the various stress factors, which are present as the child is developing and growing from a infant to a toddler, then matures into adolescent, and later on into a mature adult.

He or, she goes through various stresses or vulnerable factors, which ultimately culminates, and progresses into a various types of emotional, or behavioural disorders. So, let us talk about the statistics that we have. So, child and adolescent they constitute the disorders which they constitute approximately 40 percent of our national population, that is approximately 300 million, and the mental health conditions, which are prevalent is 16 percent of the global burden of disease, which is somewhere, which the age group is somewhere around 10 to 19 years. So, overall, 8 to 13 percent of the children, they require mental health services presently.

So, these interactions of genes and the environment where the child is growing, evolving, they play a very important role in eventually producing this sorts, this various behavioural or emotional disorders. The toxic stress, that is present can damage brain architecture and increase the likelihood that significant mental health problems will emerge quickly. Now, because of this enduring effects of the brain development, and other organ systems, toxic stress can impair the various other the stages of life which the child goes through, that is being hampered, like school going, academic achievements, both physical and mental outputs, all are hampered, as the child goes, and faces the various stresses in this life.

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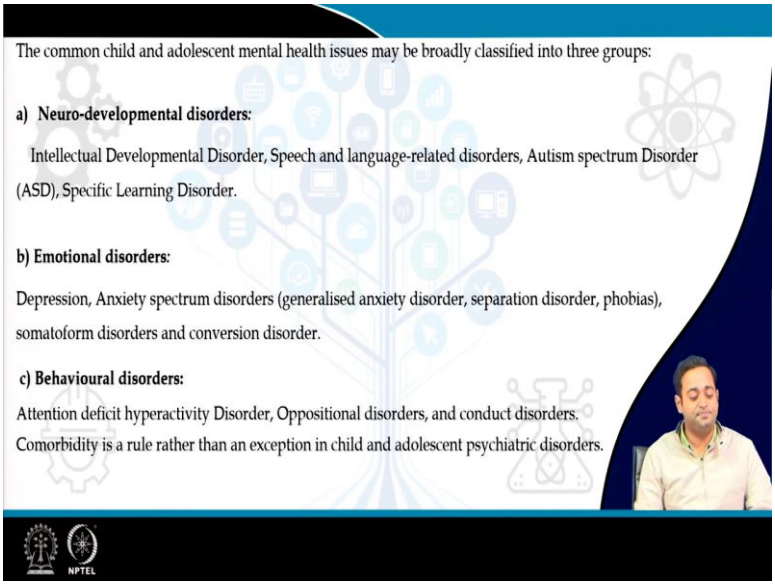

So, what are the risk factors for the development of various mental health issues in children? They are divided into biological factors, the child the factors related pertaining to the child itself, and the place where the child is growing, that is environmental factors. So, among biological factors, it is like how the child was evolving from a toddler, infant to a toddler and then to like early adolescent, middle part of the adolescent, later the terminal part, late adolescence, that is teenager age groups. Those are the specific age groups which actually requires attention.

So, as the child is born, it actually goes through various kinds of stresses, if the mother was suffering from various medical disorders like hypertension, toxaemia of pregnancy, or during the delivery of the child, he or she may have suffered various injuries or due to some, like hypoxic ischemic encephalopathy, or whether wages toxins, infections, all of these factors, they contribute individually and have an important role in producing various emotional behavioural problems.

So, what are the environmental factors? Environmental factors you have all those psychosocial issues, family issues, financial issues present at home when the child is growing parent, when parents are abusing substances they are addicted to some addictive substances like alcohol, nicotine or cannabis. Maybe, there might be parental conflict, there may be poorly educated parents who will not be able to further guide their children in a proper way, or in a proper direction. So, these all kinds of factors, they all contribute towards the, they all culminate into developing emotional and behavioural disorders in children.

So, they are broadly classified into neuro-developmental disorders, emotional disorders and behavioural disorders. So, neuro-developmental disorders is when the child is born, they develop these kinds of problems like autism, pervasive developmental disorders, among them, you have Asperger's, Rett syndrome, childhood disintegrative disorder, language disorders.

Among emotional, you have childhood depression, childhood, schizophrenia or bipolar, all these entities can occur. Among behavioural disorders, we have attention deficit hyperactivity disorder, very commonly seen among child age, early part of the like child age, when the child is evolving. Then you have conduct disorders, the deceptive behavioural disorders, you have oppositional defined disorder, and conductive disorder, all those diseases.

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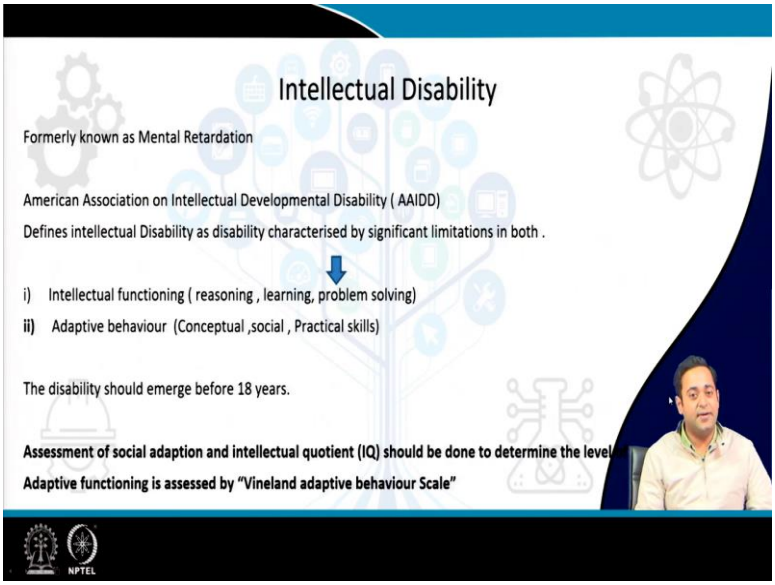

Mild Intellectual Disability-

Includes 85% of persons with intellectual disability.
Can acquire academic skills upto 6 th class.
Can live independently with appropriate support and raise their own families.
IQ ranges from 50-70.

Moderate Intellectual Disability

Includes 10% of persons with intellectual disability.
Challenged academically and can reach upto 2nd - 3rd class.
Socialization difficulties set these persons apart and great deal of social and vocational support is [illegible]
Able to perform semiskilled work under appropriate supervision.
IQ ranges from 35-50.

Severe Intellectual Disability

Includes 4% with Intellectual Disability.
Cause for the disability is more likely to be identified.
Develop communications skills in childhood and often can learn to count and as well as recognize words
May adapt well to supervised living situations and may be able to perform work related tasks under supervision.
IQ ranges from 20 -35

Profound Intellectual Disability

1-2 % with Intellectual Disability
Have identifiable causes for their condition
Self care skills and communication of their needs can be taught with appropriate training
IQ less than 20

Assessment:

Weschler

>= 130- very superior
120-129- Superior
110-119- High average
90-109 - Average
80-89 - Low average
70-79 - borderline
<=69 - Extremely low

Stanford – Binet

145-160 – very Superior
130-144 - Gifted
120-129 - Superior
110-119 - higher average
90 -109 - Average
80- 89 - Low Average
70 -79 - Borderline
55-69 - mildly impaired
40- 55 - moderately impaired

So, let us come to intellectual disability. Formally, it used to be known as mental retardation. So, American Psychiatric Association on Intellectual Developmental Disability, they have defined, and this intellectual disability as the limitations in two entities, that is intellectual functioning and adaptive behaviours, they both should be present in order to classify this patient's, this child would be suffering from intellectual disability. So, assessment of social adaptation and intellectual quotient, this should be done to determine the level of disability of the child. And the child, this disability should emerge before 18 years of age.

There can be various etiological factors, among genetic factors, you have chromosomal disorders, various inherited, the child gets born with this kind of disorders, various lipid storage disorders, various protein deficiency disorders, various enzyme deficiency disorders, there are various kinds of disorders which is present. So, as I told you, there were, there are innumerable causes under developmental, and environmental cause, factors like psychosocial factors, various mental infections, childhood infections, all those things can contribute to the development of intellectual disability.

So, this intellectual disability is basically classified into mild, moderate, severe and profound. So, who are the children who are mildly disabled child? So, they are basically, they go and acquire up to the academic skills up to sixth grade, they can easily go, So, there is no difficulty in comprehension, up till the fourth to sixth grade of class, the comprehension. So, this child can easily comprehend the subjects up till sixth to fourth grade, and they have the ability to live independently without any personal assistance.

So, they can actually live their life independently, these are the mild intellectually disabled children. Among moderate intellectual disabled, they are the ones who go up till class second or third, and they if given proper care and attention, so, they are able to do semi-skilled work under proper supervision, and their IQ ranges somewhere between 35 to 50.

So, among severely intellectually disabled patients, they are most likely, the developmental communication skills in childhood, often they learn to count and as well as recognise words. So, they adapt to supervise living conditions, and may be able to perform tasks better under supervision, their IQ ranges somewhere around 20 to 35.

And among profound, they are basically the bedridden ones who are not able to work properly. They are not able to do any kind of voluntary functions, mostly they are bedridden, and their independent resistance is negligible, and they need 100 percent more than 90 to 100

percent personal assistance in order to live their life properly. So, the IQ assessment is basically done with Wescler's scale or with Stanford and Binet scale.

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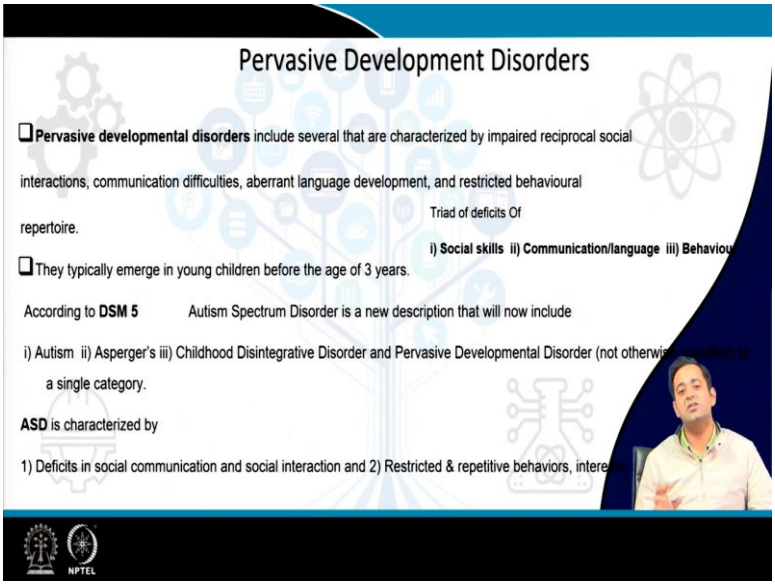

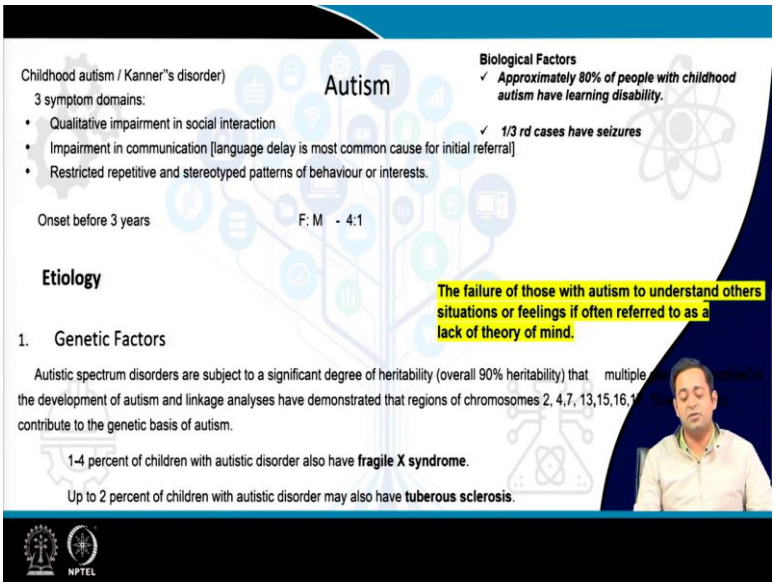

Let us come to pervasive developmental disorders. So, among pervasive developmental disorders, previously there were 5 childhood disorders. It was autistics disorder, it was pervasive developmental disorders. It was Aspergers syndrome, Rett syndrome, those 5 entities were taken. But now current classification of autistic spectrum disorder is childhood disintegrative disorder, you have autism, you have Rett's, and you have Asperger. So, here the classification is stressing on two broadly important factors. First is social communication that is deficits in social communication and the second is repetitive and restrictive activities. Language abnormality is no longer considered a basic factor in the autistic spectrum disorders.

So, what is autism? Autism was basically known as Kanner's disorder, because Kanner was the first person who identified this in a small child. So, there are basically three symptom domains qualitative impairment in social interaction, and impairment in communication, specifically, the language delay which is seen most often when the child is growing by the parents, and there is restricted and repetitive activities, stereotypic pattern of activities.

So, onset of the autism is before the 2 to, like somewhere between 2 to 3 years, females are most commonly seen. Among biological factors, approximate 80 percent of the people that is a, with childhood autism have learning disability. And one third cases of the childhood cases who has, who are having autism they suffer with seizures.

What are the prenatal and postnatal factors? So, this most commonly it is congenital rubella infection during the pregnancy, when the child is getting born, it is most commonly seen in the first trimester, and radiological findings of this just this kind of patients which includes larger brain volumes with acceleration in their brain growth, you have microcephaly, which is

most obviously seen. And with the MRI findings is suggestive of increase in size of the lateral ventricles, and increased volume due to three possible mechanisms. One is increased neurogenesis, in decreased neuronal death, and increased production of non neuronal brain tissues.

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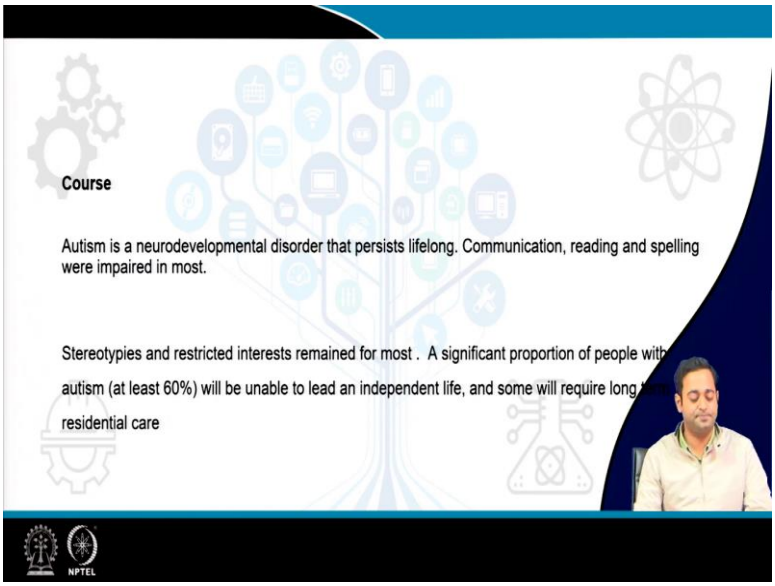

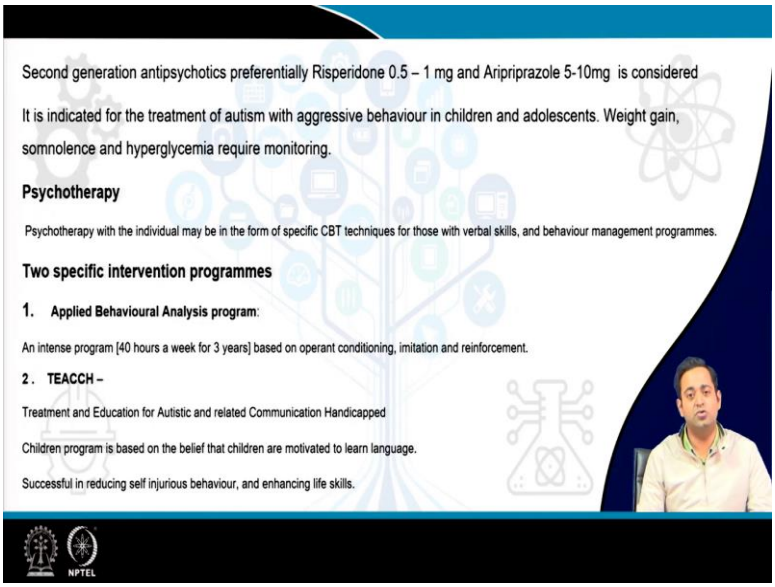

The course is, it persists lifelong autism and there is difficulty in communication, reading and spelling. So, basically, there is no treatment for autism and how is we actually manage the case by various other non-pharmacological and pharmacological management. So, among pharmacotherapy, in case of agitation or behavioural issues, SSRIs are most commonly implicated, and at times when the aggression and people issues are not controlled with the help of selective serotonin reuptake inhibitors that is antidepressants, we actually go to atypical antipsychotics preferentially Risperidonw, Aripriprazole are used to counter the aggression and agitation.

So, among psychotherapy, the treatment, we are basically two intervention programs, what is applied behavioural analysis program, which is basically of 40 hours a week for three years. And, it is based on operant condition that is positive reinforcement of the child, the reward is being given to the child whenever he or she, whenever the child is not doing the activities or behaviours, which is not asked to do, and giving and all those activities and behaviours which is a child is asking to do.

The other this TEACCH, that is treatment and education for autistic and related communication handicapped childrens. So, these are basically, these programs are acted on the belief that child are motivated to learn the language, and there is successful reducing in, that is reduction in self-injurious behaviour, and there is an enhancement of the life time skills.

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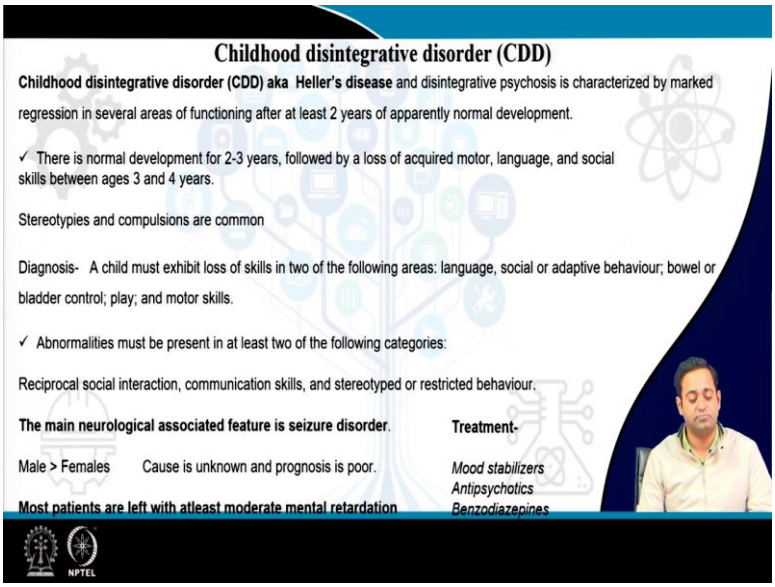

Next is childhood disintegrative disorder. So, this kind of disorder they basically there is marked degradation in the several areas of functioning after two years. So, up till two years, a normal cognitive behavioural development is normal for them. But after two years, there is sudden regression of the activities of all the spheres, which has developed previously it comes to a halt or stop.

So, this regression are basically in the form of motor, language and social skills. So, how is it diagnosed? The child must exhibit loss of skills in two of the following areas that is basically either language, social or adaptive behaviour, bowel barrel control that is not able to urinate, or defecate properly and the various motor skills, walking, running, climbing all those problems. And they are most commonly associated with seizures.

Treatment is with basically because of the agitation or behavioural issues, or impulsivity, increased hyperactive behaviour, anti-psychotics, and at times mood stabilisers are required to counteract the issues.

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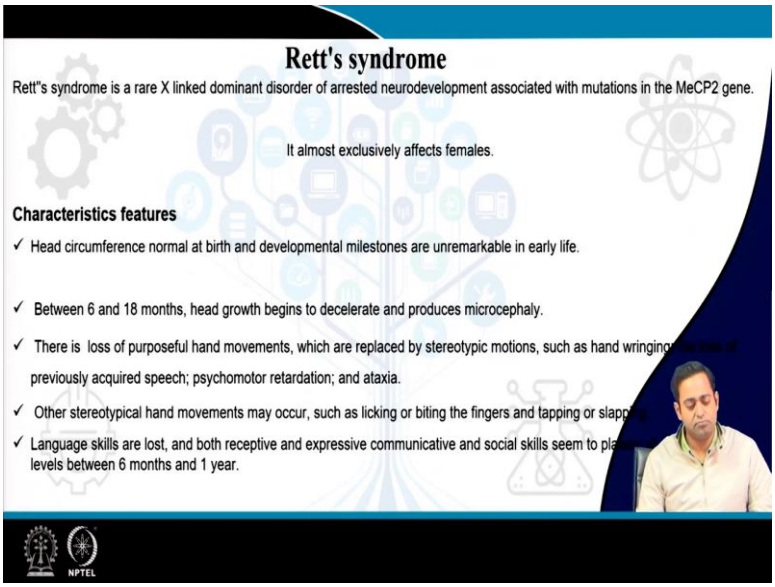

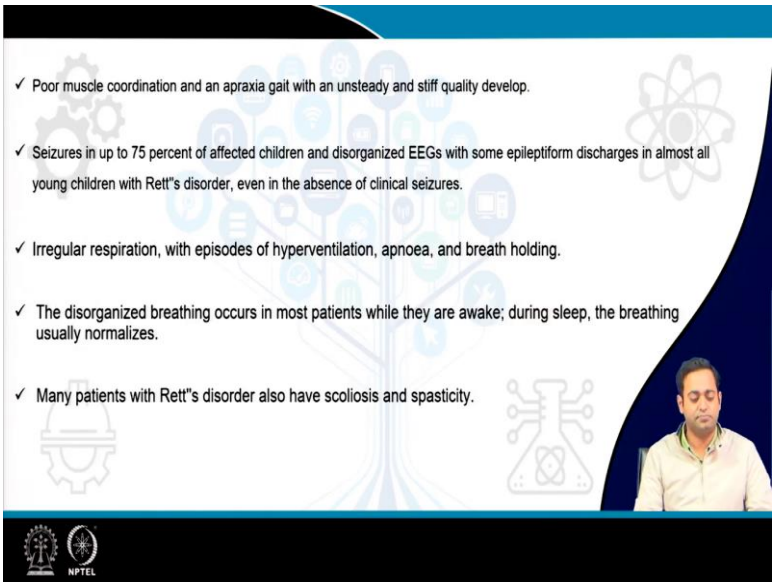

Next is Rett syndrome, Rett syndrome, they are basically X linked dominant neuro-developmental disorder, most commonly seen in case of girls that is female child. So, what are the characteristic features? The head development is up till, the up till six months is normal, but and the as well as the normal development of the child, but after six months, there is deaccelerated growth, brain growth specifically and there is loss of voluntary functions where the child has gained, the toilet functions, bowel barrel activities on various skills which tests with the child has acquired previously, there is gradual deacceleration, or gradual loss of those functions.

So, there is stereotypic hand movement, like licking, biting the fingers, tapping, slapping. Language skills with this child previously has acquired is gradually lost, that is both in terms

of receptive, how to speak properly in a public space? How to communicate? How to have those interrelation? How do you relate yourself to anyone? How do you speak? All those things are eventually lost and stopped.

So, there is poor muscle coordination leading to apraxia gait difficulties. Seizures are associated of three fourth of the cases in the your Rett syndrome. There is irregular respiration in the form of apnoea, breathlessness, and there is disorganised breathing in most of the patients. Ultimately scoliosis and spasticity later on leading to rigidity develops, and the patient becomes wheelchair bound.

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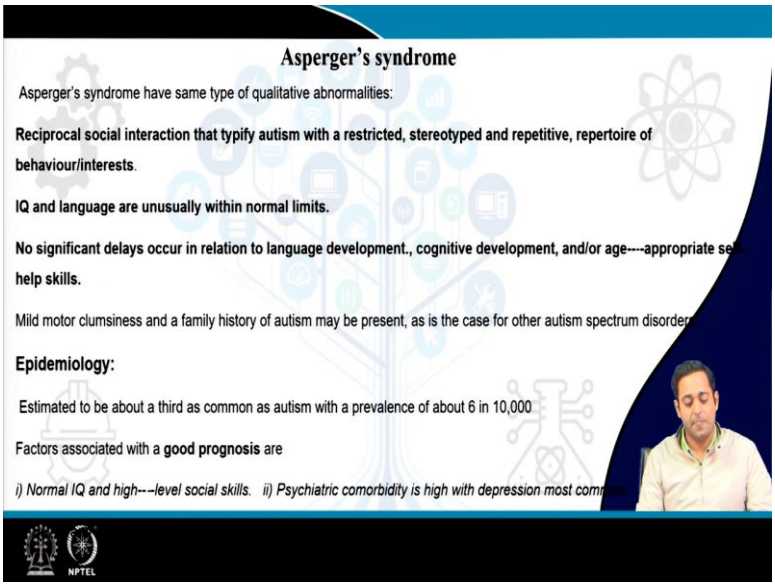

What is Asperger's syndrome? Asperger syndrome is where the language there is no involvement of the language, the intellectual problem of the child is not present, where in case of autism, it is present. So, this is how you differentiate between Asperger's syndrome and autism. So, here you have IQ, and social deficits in social communication, but there is no issues related to language abnormality. So, they are basically within normal limits.

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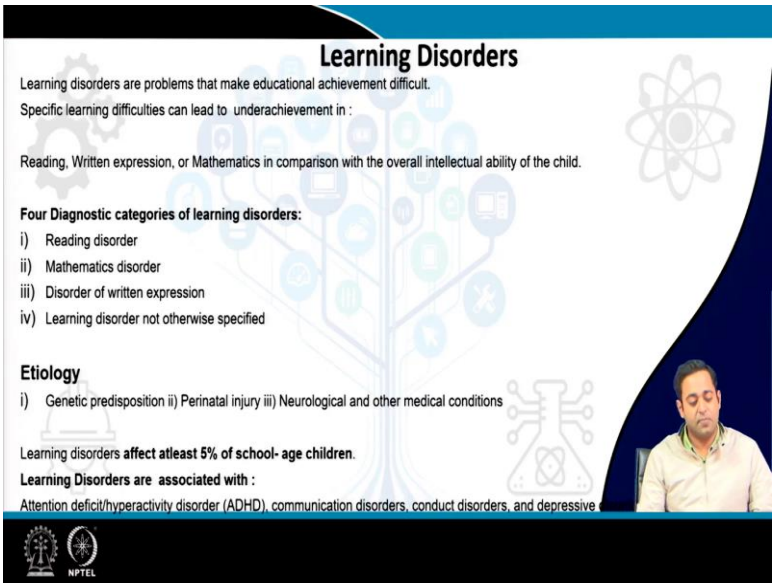

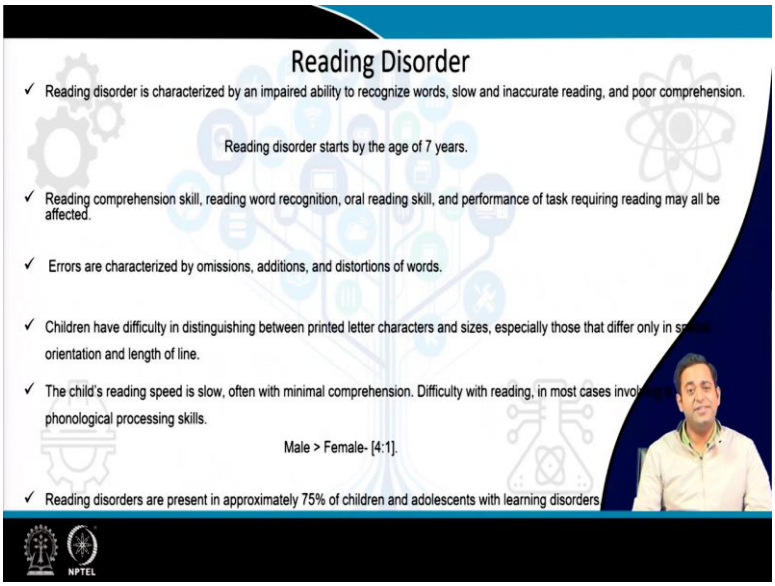

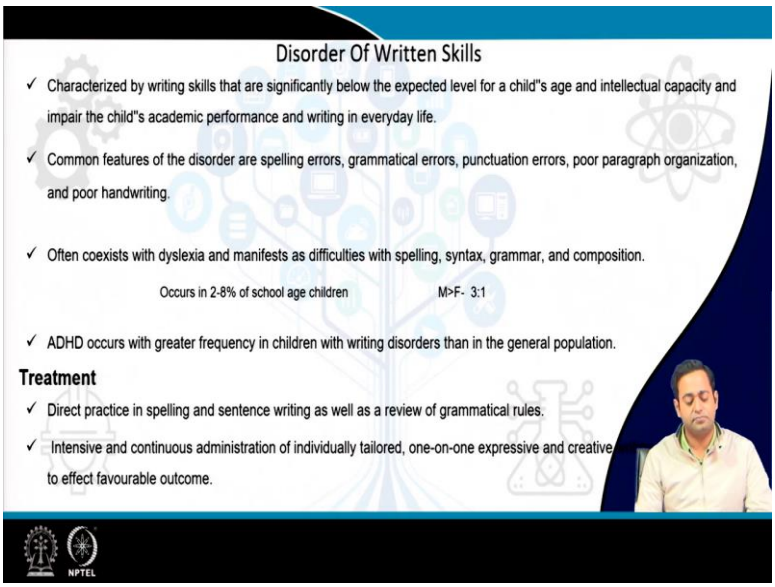

Let us come to learning disorders. So, learning disorders, they are the problems that make educational life difficult for the evolving child, growing child. So, what are the basic types of learning disorders, problems in reading, problems in writing, mathematical calculations, and all those are affected. So, what are the etiological factors related to learning disorders? They can be genetic, perinatal injury, when they are getting when the child is getting a birth, or neurological factors, or various other medical conditions where the child can acquire.

So, what is reading disorder? Reading disorders characterised by impaired ability to recognise words, slower, inaccurate reading and poor comprehension. So, it is basically starts by the age of 7 years, and there is difficulty in comprehension, word recognition, oral reading skills, and the tasks requiring all those comprehension, or reading all those things are affected.

So, errors are basically in the form of omissions, additions, and distortification of the words. So, omissions is where the last word or the initial part of the word is being omitted, it is escaped by the child. Additions, which means the child which will actually add on two, three letters while they are speaking the words.

And the distortion means while speaking a word there will be, the phonation of the word will be different from what the typical word is going to sound. So, this children, they have difficulty in distinguishing printed letters, like what is, whatever it is being written, sizes, and especially those that different spatial orientation and length of line, what is written in the books. So, that is why this difficulty in reading leads to slow speed in reading with minimal comprehension. So, males are most commonly affected, the male child is commonly affected.

What are the disorders of writing skills? Writing skills that are significantly below the expected level for the child's age and intellectual capacity, those of who are the common age group of that particular child, who is affected with writing skills, the that child, that particular child will not be able to function normally as the normal counter peers. So, common features are spelling mistakes, grammatical errors, punctuation errors, and they are having poor handwriting, because of all these problems they culminate into poor writing as well. So, they coexist with grammatical mistakes, male child is commonly seen with these problems.

How do we treat this? There is direct practices spelling and sentence writing, and there is intensive and continuous administration of individual, that is patient is asked to have those intensive kinds of training and coaching during, whenever this kind of problems occur for the child.

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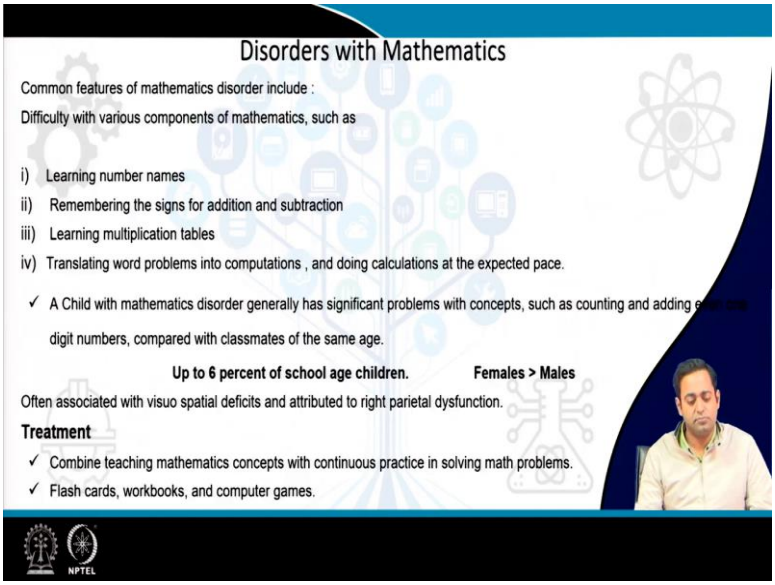

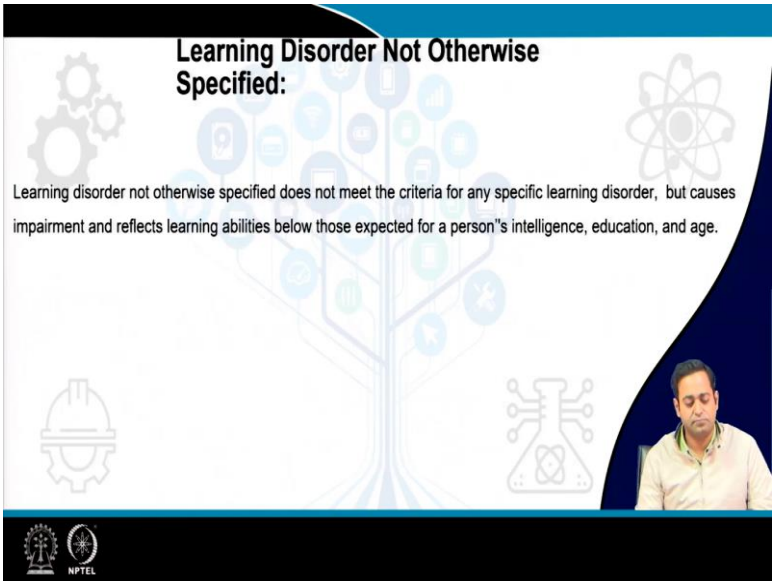

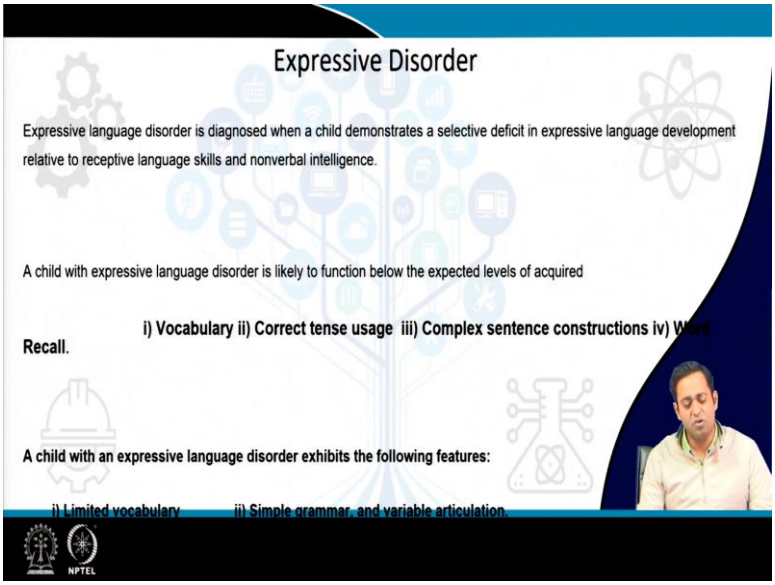

Disorders with mathematics, that is having problem in various mathematical calculations. These child, they have difficulty in learning numbering names, remember the signs that is addition, subtraction, multiplication, division and tables. And they have difficulty translating word problems, which is given in the theoretical words into computations, they are not able to do, they have difficulty in doing that.

So, up to 6 percent of this occurs in the preschool age children and the female children they are most commonly seen as compared to the male child. So, treatment is with the guidance, and coaching teaching mathematic concept and continuous practice, recurrence and rigorous practice of this kind of problems can help solve the problem of the child.

So, learning disorder not otherwise specified, does not meet the criteria means, when all those features of mathematics, or spelling mistakes or a reading or writing skills, when they does not certify, that is why there is not otherwise specified is entertain, the diagnosis of this is entertained when all those three factors are not coming, the symptoms are not getting into the criterias.

What are the communication disorders? Communication disorders are basically four types that is problem in expressing words, or in comprehension, the receptive part or they may have speaking, fluently stuttering, or they have some speech sound disorders, that is phonological disorders. And lastly, you have social communication disorders, the child is not able to have those social perception skills of social deception, expression, comprehension, all those things are affected.

So, what is the expressive disorder? It is demonstrated when there is deficits in the expressive component of your speech when the child is not able to express out what she or he actually requires or it is in need of. So, child with expressive language disorder is basically more portrayed in the form of difficulty, vocabulary, correct tense usage and complete sentence construction, and word recall.

So, child with this language disorder will have limited vocabulary and simple grammar and variable articulations. So, male child, they are most commonly seen with this problems, and comorbidity that is the child who is having this kind of problems, they are comorbidly associated with ADHD, attention deficit hyperactivity disorders, and various anxiety and oddities conduct disorders, disruptive behaviour disorders, management is with speech therapy, because there is problem in the speech component of the child.

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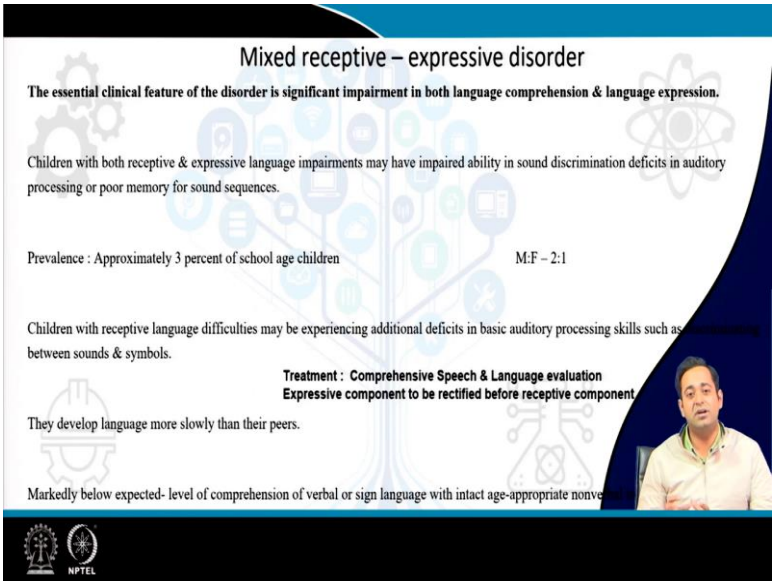

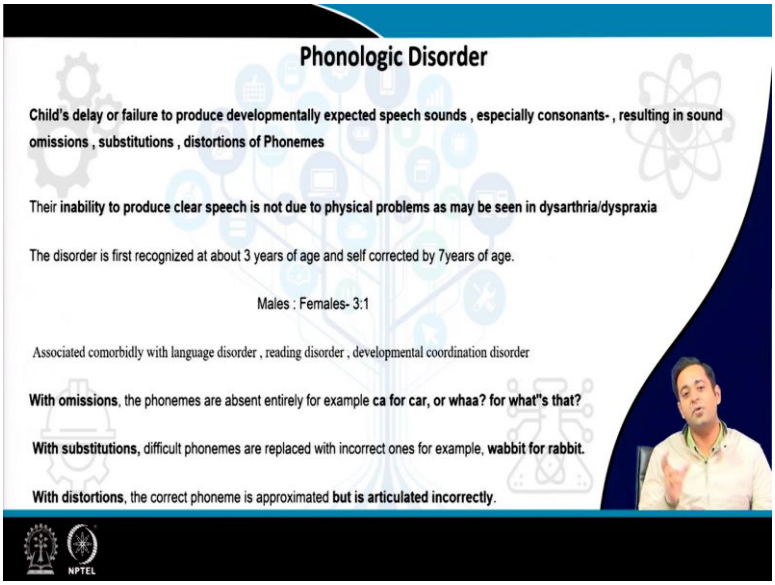

Etiology

i) Maturational delay in the developmental brain process
ii) Neuronal Cause
iii) Genetic Factors- Monozygotic Twins have higher chance
iv) Developmental coordination disorder

- ✓ Children with speech sound disorder are delayed in , or incapable of producing accurate speech sounds that are expected for their age , intelligence and dialect.
- ✓ Children with speech sound disorder may have various concomitant social ,emotional , behavioral prob

Treatment

a)Phonological approach b) Traditional Approach

Stuttering

It is a condition in which the normal flow of speech is disrupted by involuntary speech motor events

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Stuttering can include a variety of specific disruptions of fluency

It includes

a) Sound or syllable repetitions
b) Sound prolongations
c) Dysrhythmic phonation and complete blocking or unusual pauses between sounds and syllables of words

Male : Female – 3:1 prevalence 1% in the general population.

Stuttering tends to be most common in young children and has often resolved spontaneously by the tim

Etiology:

i) Genetic
ii) Incomplete cerebral dominance
iii) Hyperdopaminergic state

- ✓ The typical age of onset is 2 to 7 years of age with a peak at age 5 years.
- ✓ Preschoolers and school age children who stutter exhibit an increased incidence of social anxiety, school refusal, and other anxiety symptoms.
- ✓ Stuttering is also associated with a variety of abnormal motor movements, upper body tics, and facial grimaces. Disorders that coexist with stuttering include phonological disorder, expressive language disorder, mixed receptive ex disorder, and ADHD.

Management: speech therapy.

What is mixed receptive and expressive problems? When the child is not able to comprehend as well as expresses problems. So, there is problem in both the components of speech and that is why there is this impaired ability in sound discriminations of deficits in auditory processing or poor memory of sound sequences. So, prevalence is basically 3 percent of the schoolchildren, male childs are, children are more commonly affected with this kind of conditions.

So how do you treat this, there is comprehensive speech and language evaluation, and there is expressive component to be rectified before the receptor component because if you are not able to express well, that means you are not able to comprehend well also. So, this two has to be sorted out differently.

So phonologic disorder, there is child's delay or failure to produce developmentally speech sounds, especially consonants resulting in sound omissions, substitutions, distortion of phonemes. So how are these? So in case of omissions the for example car, only the ca part is being taken, in case of what only the wha component is taken, and t is being omitted.

In case of substitutions you are replacing a letter from the entire word and pronouncing it rabbit to wabbit. And in case of distortions the phoneme is approximated you are actually not phonating that word, not voicing that word properly and you are approximating that word, you are cutting short that word while you are speaking it, take it out.

So, what are the etiological factors, delay in maturation as a child develops that is delaying the developmental milestones of the child, neuronal cause can be one of the reasons, genetic factors you have like the monozygotic twins, means the ones who are having same genetic components in DNA, they are affected most commonly, and developmental coordination disorder, if that is associated with this, then the child can also have this kind of problem.

So, children with speech sound disorder, they are incapable of producing accurate speech sounds, that aspect of the age, and children with speech sound disorder, they have various concomitant social, emotional and behavioural problems. So, what is the treatment? Treatment is phonological approach and traditional approach both.

Stuttering, stuttering is a condition in which normal flow of speech is disrupted by involuntary speech events. So, this includes difficulty in sound syllabus, syllables repetitions, sound prolongations, they will continue to prolong that exaggerate that word while speaking or there will be distribute phonation and complete blocking or unusual pauses, like while you

are speaking in a sentence, that there can be a pause, or there can be punctuation, or there can be cessation, or there may be complete stoppage of the, while you are speaking, there will be a block, certain block in the phonation or voicing of the word or sentences. So, stuttering, they tends to be most common in the young children and they results spontaneously, by the time a child is older.

Etiology can be genetic, same as all those hyperdopaminergic state can be one of the important reasons for this stuttering. So the onset is 2 to 7 years and peak at 5 years of age, Preschoolers and school age children they exhibit this problems when they have social anxiety, they are not able to speak in the open public spaces or public domain or there may be school refusal, child does not wish to go to school due to various other reasons present.

So, it is commonly us the characteristic features which is found with the this problem is abnormal motor movements, upper body tics, facial grimaces. And other problems can be various expressive language disorders or mixed receptive expressive results, because child is not able to comprehend well, so he will not be, or she will not be able to express his problems or his needs very clearly.

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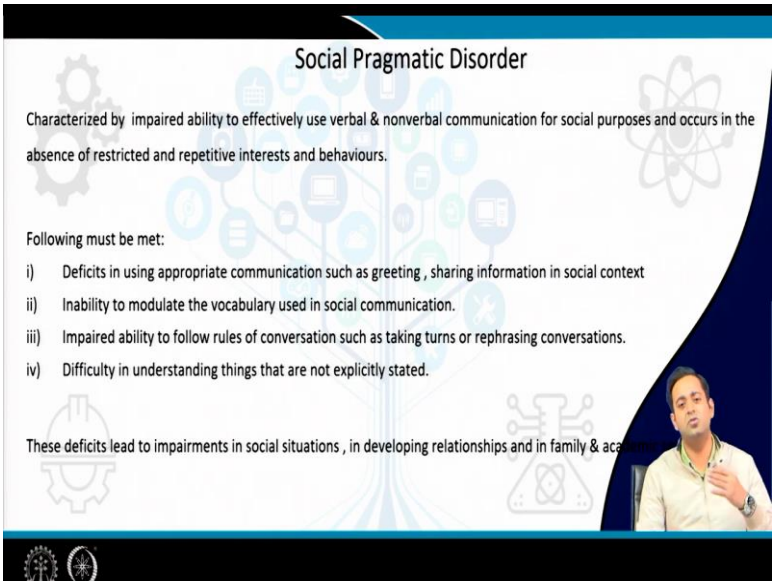

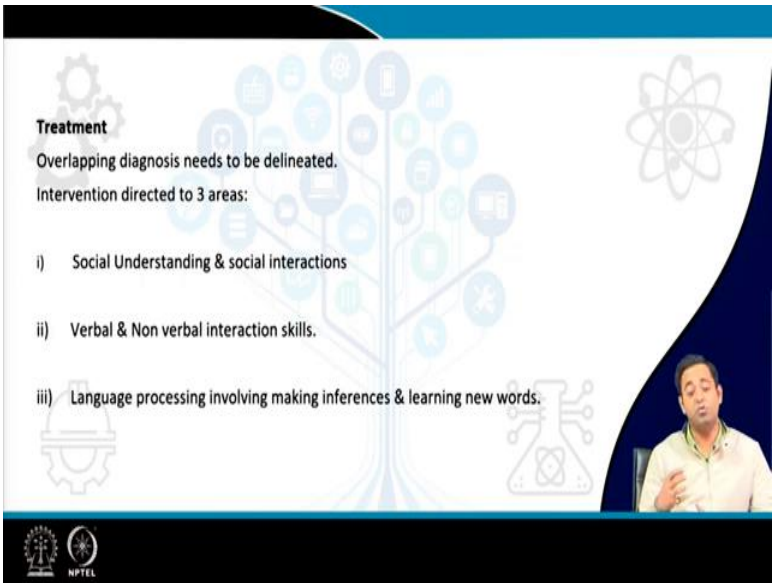

So, what is social pragmatic disorder, it is inability or impair ability to effectively use those verbal and nonverbal modes of communication. So, he or she is not able to relate himself to the surroundings, how to communicate properly. So, there can be deficits in appropriate communication that is greeting, sharing information, how do you speak, how do you communicate with others, friends, families.

So, there is impair ability follow the normal rules of conversation to pause in between when the others are speaking, to anticipate what others can tell, and to comprehend well, process the information and an express out and to speak out the answers for which the questions was asked. So, these are the important things the child is not able to do when the he or she is suffering from social pragmatic disorder, the social rules of conversation that is being impaired.

So the treatment is understanding and social interactions, the various rules of verbal communication nonverbal communication, language processing, involving inferences and learning new words. So the child is taught how to, thus taught the social perception skills, how to comprehend while you are talking with anyone, how to speak, how to have those social cognitive skills, how to acquire those skills and how to reproduce those while you are talking with the person.

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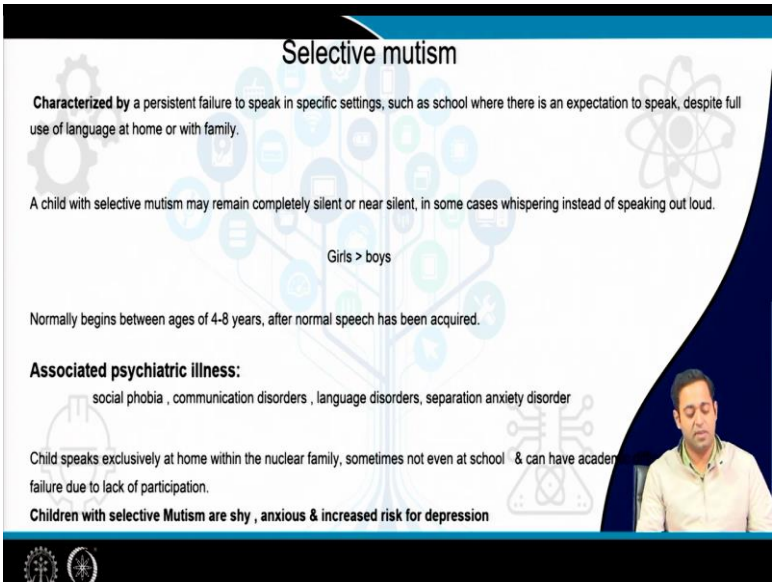

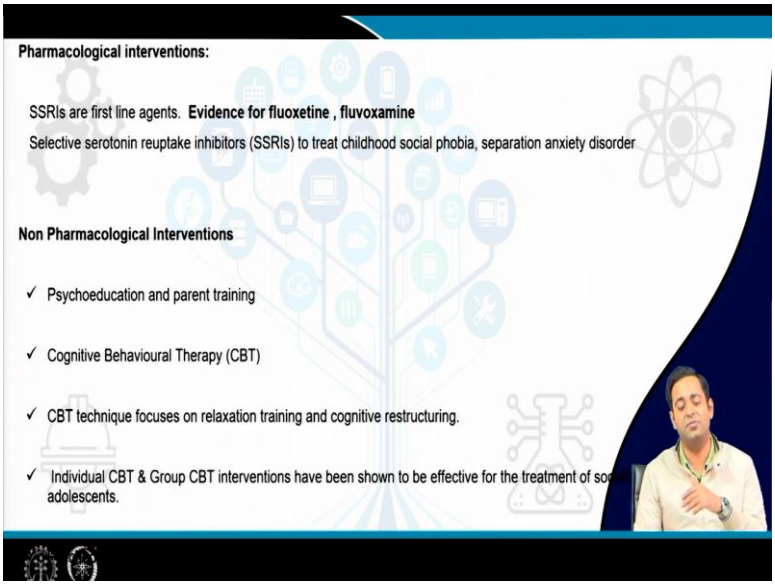

Let us come to emotional disorders. What is selective mutism? Selective mutism is where there is persistent failure to speak in a specific settings such as school, where there is an expectation to speak despite full use of language at home. So, there can be several instances where the child is coming to OPD, or to or complained by a parent that my child does not speak very properly, or does not, is not able to communicate properly, when he or she is at school or at college, or at extracurricular activities, but he or she is very spoken and he talks sufficiently when at home.

So, this can be due to social phobia, when the child is actually suffering from some anxiety issues, some communication disorders, language disorders, difficulty in reading, writing, or expressive or those comprehension issues, or the problems of attachment during his early years when the child got birth, and when he was evolving into infant and toddler, those caregiving roles of the attachment roles of the mother child, the caregiver child that has not been formidable. So, all these factors they have a role in selective mutism.

So, what are the non pharmacological, pharmacological intervention this for this, the non pharmacological interventions are psychoeducation and the parent training. So, there can be cognitive behavioural therapies where the cognitive appraisals, the alternative processes of the thoughts are actually being asked to the child to think properly to analyse your thought processes, these can be the reasons for which you are facing these kinds of problems.

So, this focus is basically on relaxation technique, this CBT associated with this and individual as well as group symmetric techniques can also be tried in order to treat this condition. So, if at all, the child is not being relieved by the symptoms of non phonological

mode of treatment, in among pharmacological mode, when the patient that is a child, if he or she suffers from any anxiety issues, that is phobias or separation anxiety disorder or various other problems, then SSRIs or at times do maybe some behavioural agitation, low dose antipsychotics can also be tried.

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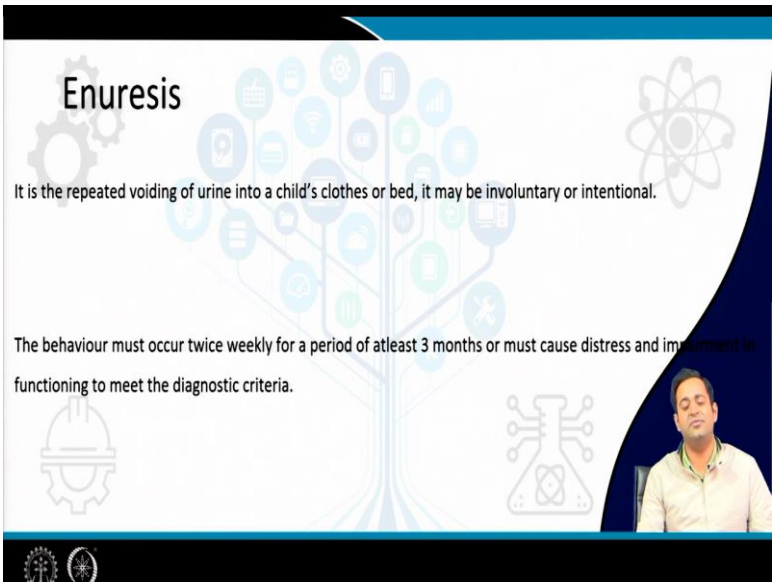

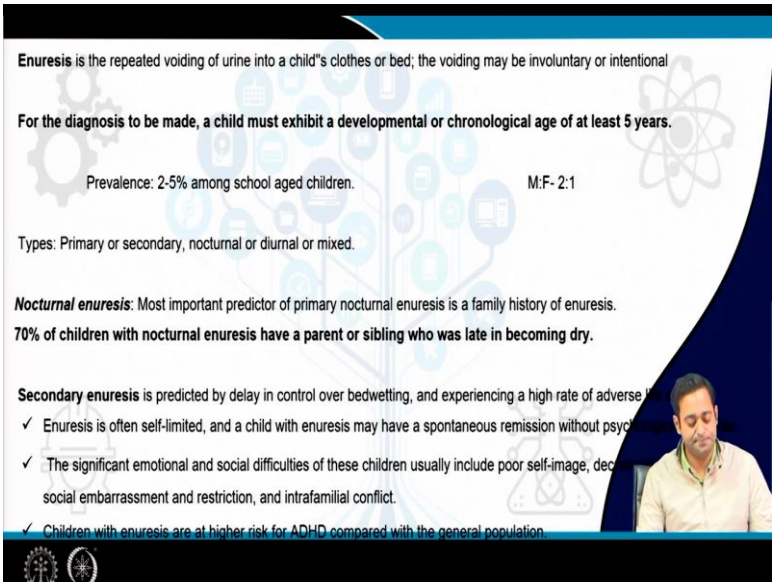

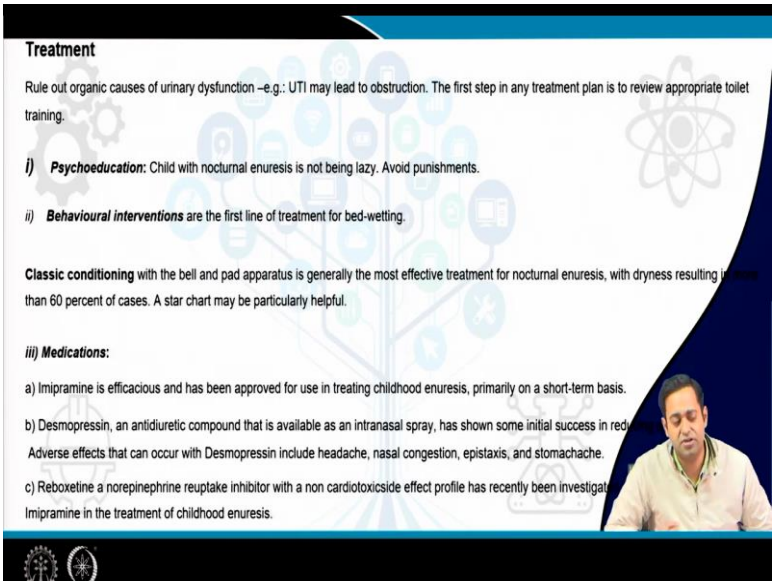

Enuresis, what is actual enuresis. So, this is a repetitive voiding of urine into a child's clothes or a bed, this may be due to both involuntary factors or it can be intentional. So, this behaviour of the child, this must occur twice weekly, for the period of at least three months and cause significant distress. So, this is diagnosis for the child who has attained constitutionally, that is constitutional age much be of at least 5 years.

So, this can be either primary or secondary. So, most important predictors of this is a family history of enuresis. So, if a child, if child's father is suffering from this, or was suffered was had suffered previously, so, there is seven times more chances that the developing child might have nocturnal enuresis.

So, secondary enuresis is often self limiting, and childhood enuresis have a spontaneous remission without psychologically if it is not associated with psychological sequences. So, there can be significant emotional and social difficulty to the child which leads to poor self image because he or she is not able to control the urination at night, it is decreased self esteem, social embarrassment, and which leads to interferfamilial conflict between the father child, mother child or between the parents that you are not able to look after the child properly, all those things evolve eventually.

So, what happens in this elimination disorders enuresis, or incontinence is that this cortical control of the enuresis or encopresis all this they happen as the child evolves, and these all things they are occurring under the control of bonds or cortical frontal lobe all these things. So, as the child's brain matures, so, there is a sequence of events for from which these various your sphincters, the control of the sphincters are acquired. So, initially, you have those

diagonal fecal continence control, then you have nocturnal fecal continence control, then you have diurnal enuresis control, and later on the last is nocturnal enurectic control.

So, because of these issues, the nocturnal enuresis is most commonly seen because it is acquired and the it is acquired most lately. That is why the nocturnal enuresis is most commonly seen as compared to the encopresis or various other elimination disorders. So treatment is with the non pharmacological management first that is psycho educating the child with the problem.

Second is the behavioural intervention, behavioural intervention is with the pattern alarm techniques where the child is allowed to wear the pad, where the alarm buzzers and tick us off and awakens the child during, at the time of urination or when the child feels to urinate. This is how there is breaking the chain or visual, vicious cycle of events.

So, if this behavioural intervention and this, they does not suffice or does not produce or bring about relief of the symptoms, then medical line of management is taken over where you have imiparamine, imiparamine is basically a tricycle antidepressant. So, the they are being tried for these kind of problems, if they are not bringing relief of symptoms and desmopressin that is an antidiuretic compound, it is available as intranasal spray, this has shown some initial success when the patient is being when the child is being given with.

And lastly, there is a recently evolved molecule that is reboxetine, a norepinephrine reuptake inhibitor. Good evidences show that child, there is a good response for this particular molecule in case of nocturnal enuresis.

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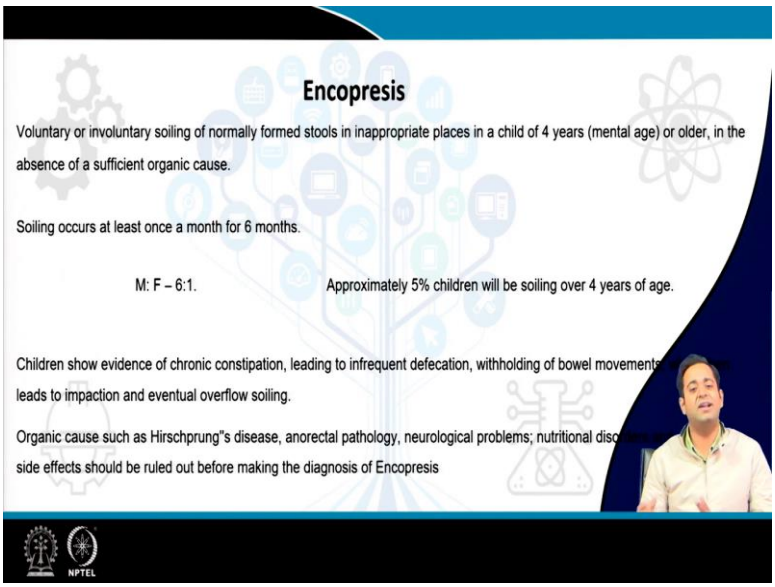

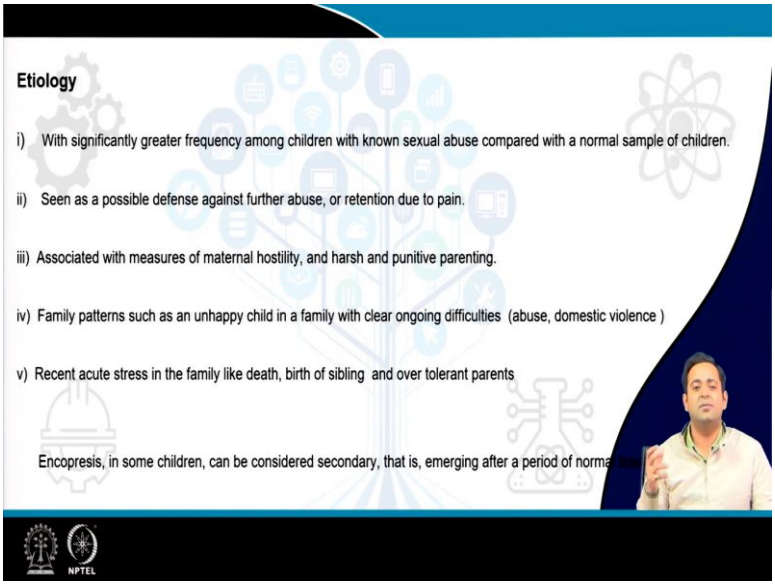

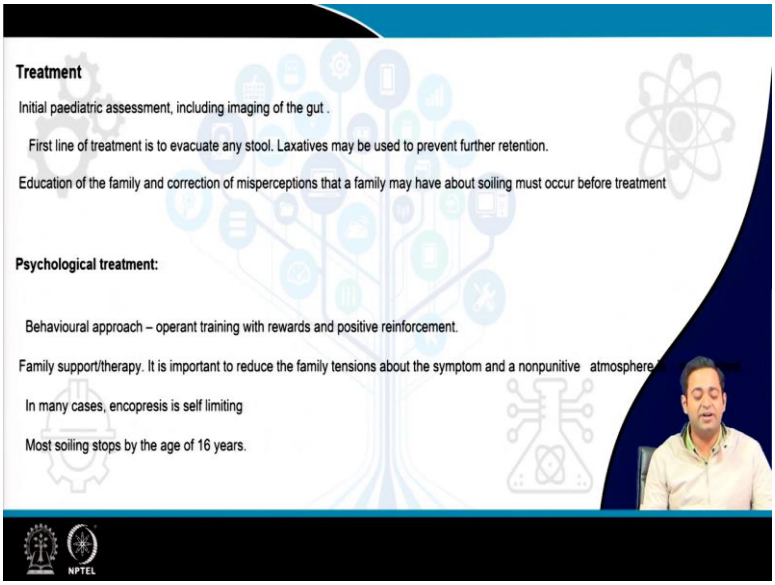

Encopresis, so, encopresis is voluntarily and involuntarily soiling of normally forms stools in inappropriate places. And this particular thing should be diagnosed when the child is approximately 4 years of age, should be minimum 4 years of age and male child male children they are most commonly seen as compared to the female child and this particular behaviour of deliberately passing of just voluntary or involuntary passing of stools should be present for at least six months continuously.

So, child shows evidence of chronic constipation leading to infrequent defecation, withholding of bowel movements, which then leads to infection and overflowing. So, this organic factors which can be present is Hirschprung's disease or congenative megacolon or neurological, various neurological problems, various nutritional problems, this all should be ruled out before making a diagnosis of and encopresis.

So, etiology you have greater frequency among children with sexual abuse can be one of the reasons associated with maternal hostility, harsh punitive parenting, parents are very punitive, they are giving harsh, severe kind of punishments whenever there is this kind of activities at home, there is family pattern that is unhappy family or there is issues with the family, that is financial issues, parents are not properly educated, they are taking various kinds of addictions, alcohol, nicotine, all those problems can actually comminate and produce these kinds of issues.

So, treatment is with paediatric assessment, detailed paediatric assessment and laxatives can be tried, among psychological treatment you have behavioural approach that is operant conditioning, positive reinforcement, reward has been given the child does not pass a stool in bed or various other places. So family therapy and supportive therapy has a good role.

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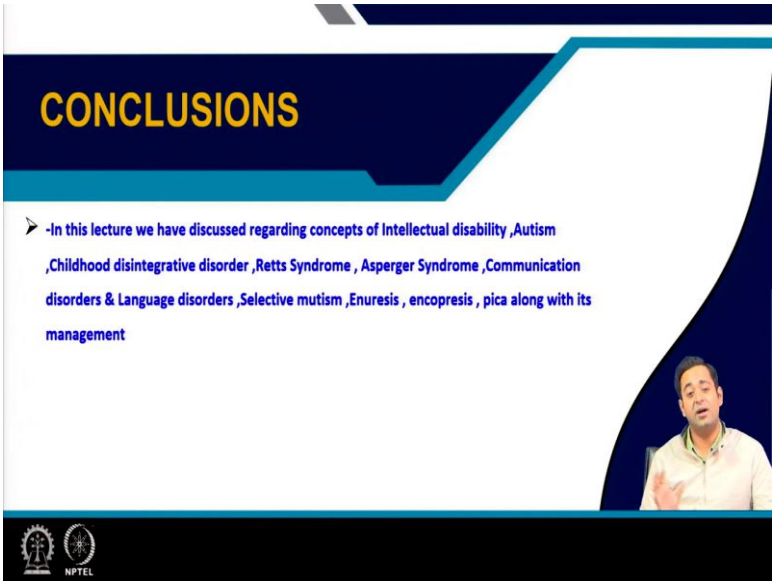

Pica is when the child eats non nutritive substances, and this particular habit should be persistent for more than one month, and this should be there for more than one year and occurring at least twice a week. So, within one week, there should be two instances when the child should be found eating this kind of non nutritive substances. So, it typically occurs within two to three years of life, and what are the substances which actually child takes maybe dirt, or paper, or some kind of stones, plastics, at times, animal faeces also, these other things that the child can eat.

So, this can happen due to non, like when the parents are not giving proper supervision or they are not properly educated enough. So what are the consequences when the child eat this kind of thing? There can be various kind of infection, intestinal obstruction or infections or ulcerations.

So in this lecture, we have discussed regarding the concepts of pervasive developmental disorders that is autism, intellectual disability, Asperger's syndrome, elimination disorders, enuresis, encopresis. Communication disorders and language disorders. Thank you.