Dear Primary Care Provider:

Gastrointestinal (GI) complications are very common in those with Cornelia de Lange Syndrome (CdLS). This briefing is written by the Canadian Cornelia de Lange Syndrome (CdLS) Foundation to help guide you in following these children and adults.

GI issues in CdLS can have the potential for serious complications and sequelae related to other body systems. Some complications can occur across the life span. Two common complications in those with CdLS are malrotation of the intestines and esophageal disease.

- **Malrotation of the Intestines**

Any child with CdLS needs to be evaluated for malrotation. This congenital abnormality of bowel rotation can be "silent" until an acute presentation, where the bowel twists on its vascular pedicle, resulting in necrosis of the intestine—resulting in a life-threatening emergency, and is a cause of mortality in CdLS. Malrotation can be screened for with either a focused ultrasound looking for malrotation (must be specified in the request) or an upper gastrointestinal barium series. If there is suggestion of a malrotation of the intestines, a referral to a paediatric surgeon is needed.

- **Esophageal Disease**

It is important that children with CdLS be evaluated and followed at regular intervals for esophageal disease including simple gastroesophageal reflux disease (GERD), severe erosive esophagitis, eosinophilic esophagitis (EoE) and esophageal strictures. If there is any concern, very early referral to a paediatric gastroenterologist is appropriate—and a screening visit with the gastroenterologist may be warranted. There are a variety of gastrointestinal tests that may be ordered including: contrast studies (upper GI, small bowel follow-through); pH probe; and, various nuclear medicine studies. Most times, an upper endoscopy will be necessary to look for esophageal disease, to help determine the type and severity, and to plan for long term care. These are usually done at an academic children's centre. It is best that the use of these tests be tailored to the individual child, depending on the present symptoms and past findings. These decisions on types of testing are best made jointly by the doctor and parents or guardians. While waiting for consultation, consider a trial on a reflux medication and then to reassess for any improvement in symptoms. Silent GERD is also common in CdLS, so there should be a low threshold for treatment.

Recommendations for Ongoing Follow-up

Infants, children and adults with CdLS can have mild or severe GI issues, but an appropriate circle of care is important to maintain health and wellbeing.

With feeding and growth, as well as the incidence of severe gastroesophageal reflux, early referral to a consulting paediatrician is warranted. For those living in areas without a local paediatrician, a partnership with the family doctor, the paediatrician at an academic paediatric centre for GI care is appropriate.

Ongoing follow-up of young children is recommended at least into school age (or beyond if there are unresolved issues). Screening for symptoms of esophageal disease should occur at each visit while speaking with the family and evaluating the child. Subtle symptoms may include: arching; behavioral problems; hoarseness; respiratory problems; and, poor growth relative to the CdLS growth curve.

Young adults with CdLS can have long-standing GERD with esophagitis, so it is important that follow-up for esophageal disease happens regularly. It is important to consider a consult in adolescence to ensure that there are no subtle signs of esophageal disease and to help with transition into adult GI care, if that is needed. It is well known that these children can have severe erosive esophagitis without complaining of “heartburn” or their symptoms are being manifested by things like aggressive behaviour and self-harm. This may require an endoscopy to help plan transition. This is particularly important since Barrett’s esophagus (a pre-malignant change) is known to occur in CdLS and at least two cases of esophageal cancer in CdLS adults in their 20s.

Frequency for Follow-up

- Of course, follow-up will need to be more frequent if the child or adult has symptoms, significant findings on any of the studies (such as an ulcer), or if the child or adult is prescribed any gastro-intestinal medications.

- Follow-up could be more infrequent if prior evaluations were negative for reflux and the child remains asymptomatic off of all gastrointestinal medications, including the over-the-counter gastrointestinal medications.

- Telemedicine allows for visits for those living far from paediatric centres across Canada.

Thank you for your important role in caring for those with Cornelia de Lange Syndrome. We look forward to a working with you on an ongoing basis to ensure that infants, children, and adults with CdLS thrive and live their best life. Please contact me with any questions or concerns.

Sincerely,
Peggy Marcon, Canadian CdLS Foundation Medical Director

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